The Builder.

No. CCCXLIX.

SATURDAY, OCTOBER 13, 1849.

OUR readers will not be surprised to hear that the Metropolitan Sewers Commission, tried and found wanting, is *dissolved*. We have been looking for the Lord Chancellor's *supersedeas* for some time past, and it has now come; whether for the purpose, simply, of ridding the board of one or two of its members found troublesome by those with most influence, or that it may be wholly reconstructed, remains to be seen. To the constitution of the board we objected in the first instance, protesting strongly and repeatedly against the systematic exclusion of professional and practical men. Its unsatisfactory proceedings, its position in the estimation of the country, and its premature extinction, fully justify our views. And yet while we have found it our duty to object in plain and strong language to the course pursued on too many occasions, we will not go so far as those who say that the late commission has done *nothing*; and we have withheld quires of complaints against it, and so offended a portion of the public, because we believed that those complaints were founded on misapprehension of its province and powers. But that it has failed miserably,—that it has shown itself incompetent for the Herculean task committed to its charge, is certain and undeniable.

We will not at this moment speculate on the probable constitution of the new board: a very short time will elapse before the question will be set at rest, for we cannot suppose that the Government will allow matters connected with the drainage of the metropolis to stand still a single week. It has been suggested in our pages, on more than one occasion, that the board should be representative, or partly so. One of our correspondents suggested that half the commissioners should be appointed by the Crown, and half elected; that there should be twelve or twenty commissioners to each district, according to the size, and that "each district commission should elect one of its body to be one of a general committee, who should have power to determine all questions affecting the general interest, and decide upon plans for general drainage."* Speculation, however, is useless, as by this time the matter is settled.

And now *as to* the plans for general drainage, which were submitted to the late commission in reply to their appeal to the public. We are anxious to say a few words in behalf of the parties who responded to this invitation, although we fear there is little chance of their obtaining any advantageous return for their labour, unless, indeed, the new commission may be led to vote some compensation to those competitors who have furnished the more useful designs.

In our article of September 8th (p. 421, *ante*) we were compelled to remark, when speaking of the appeal to the public for plans, that if there were no other proof on record of the unfitness of the majority of the commissioners for their position, the thoughtlessness, must we add ignorance, which characterized the course taken would suffice, and afterwards this same view was adopted by one of the late commission, the Rev. Morgan Cowie, who submitted a written protest against the proceedings, fearing probably, and with justice, that if he did not do so, his fitness for the office of principal at the College of Engineers might be questioned.

That others of the commissioners had felt the necessity of affording to the competitors further data to proceed upon is evidenced by the fact that one of them, Mr. Hume, addressed a letter to the surveyor, who, on the day first fixed for receiving the plans, memorialized the court for an extension of the time,—asking him what information he thought desirable to enable surveyors to prepare "the best and most comprehensive plan for so great and important an undertaking." "I see the difficulties," continued Mr. Hume, "but not the means of removing them at present, and therefore wait for information." The reply of the party addressed showed how he thought the difficulties might be met: he said,—

"I write, in the earnest hope that, by your influence and advocacy, such information will be *directly* afforded as will induce professional men of reputation and business to come forward with designs on the 1st of October next. At present it may be justly assumed that none but those who, being connected with the commission, possessed the desired data by virtue of their office, and those who, having little practically to engage their attention, have managed to acquire these data by indirect means, are qualified to compete for an object as well worthy the talents and attention of the most exalted professional minds as any object that has ever presented itself for public competition. No palace, no church, no cartoon painting, was more worthy 'a prize for the best design' than the origination of the best principle upon which to drain the metropolis, and I therefore submit to you that it is desirable not only to give the required data, but to offer distinctly a prize or prizes for such designs as may be considered by competent judges worthy of some mark of distinction.

The information which ought to be supplied to each competitor is—

An outline (reduced) plan of the whole district, for which an improved outfall is now sought.

On this map should be shown, simply—

1. The main streets.
2. Rivers and open watercourses.
3. Open and covered *main sewers* from their source (as sewers) to their outlets: along the course of each river, watercourse, and main sewer, simple figures should express the various falls or gradients, and the depth of the bottom of each below the surface of the ground; thus, $\frac{1 \text{ in } 480}{20}$ would represent a fall of ¼ inch in 10 feet and 20 feet below surface. This information should be as perfect as it can possibly be afforded by the court within the limited time. At the beginning and end of each main sewer the height, with respect to Trinity datum and low-water line at their several outlets, should be particularly given; thus,

45′ *a*TD 13′ 2″ *b*TD.

Sewer.

→ 4′ 4″ *a*LW.

The heights of surface of ground (independent of the sewers) at various and frequent spots throughout the whole district to be operated upon having reference to one datum (Trinity high-water) should be given; thus, (45) meaning 45 feet above datum at the spot on which it is figured. Whatever borings have been taken should be appended by index to the map."

About sixty plans had been *sent in* at this time, it must be remembered. The court, when they extended the time after receiving these sixty, ordered some additional information to be supplied to competitors, which reached them but a very few days before the expiration of the time fixed, and was wholly insufficient.*

The result, as a matter of course, is, that the plans are all incomplete;—the competitors have laboured in vain;—the "best plan" has yet to be prepared.

The "concise statements" of the plans sent in before the 20th August last, form a pamphlet, small folio in size, of ninety pages, and are from fifty-three competitors. The names of these are, following the printed order, Messrs. H. Austin, J. T. Barkley, G. Burge, J. H. Clive, F. Coxworthy, J. W. Couchman, M. Dunn, R. Dover, A. Doull, Dredge and Stephenson, J. Dean, R. Dixon, J. Elliott, Chas. Fowler, F. Finlay, J. Faulkner, J. Gibbs, C. Hutton Gregory, J. T. Harrison, M. Kerridge, T. Lunt, John Martin, Martin, Sowerby, and Hodgson Jones, T. Morris, J. B. M'Clean, J. Murray, John Phillips, T. W. Plum, Joseph Prestwich, Jas. Pilbrow, G. Remington, Jasper Rogers, J. B. Redman, Ross and Low, F. Roe, Rumball and Shepherd, R. Rettie, W. Radley, W. Stewart, J. Pigot Smith, J, Sutton, F. Swinburns, Herbert L. Smith. C. Sanderson, B. G. Sloper, Harcourt Thompson, Tate and Gilmore, E. Wharmby, F. Wood, and Professor Wallace. The other plans are anonymous.†

According to the statement of the late secretary, Mr. Woolrych, on the 3rd inst., fifty-four plans have been submitted since the 20th of August, making in the whole 116 plans, without reference to thirty supplementary papers. "Concise statements" of the former are required to be sent in by the 17th inst., that these also may be printed, but by whom the whole will be judged is yet to be learnt. Be they who they may, we ask at their hands, on the part of the competitors, fair play and liberal consideration.

We append here as part of the same subject, rather than under a fresh heading, the following note dated Greek-street, October 8th, and signed J. L. Hale, assistant-surveyor to the Metropolitan Commission of Sewers:—

"I observe in THE BUILDER of last week, a reference made by Mr. Bird to certain experiments made by the Metropolitan Commissioners of Sewers, in Upper George-street, Edgware-road. The experiments consisted of laying down a line of 12 inch pipes in the main sewer of Upper George-street, with 9 inch junctions, to receive the drainage of the collateral sewers. The object of the experiments was to ascertain how far, in respect of quantity of sewage, the sewers in that locality were unnecessarily large, and to ascertain what were the relative merits of stoneware pipes and brick barrel drains, for the general conveyance of sewage. I enclose a printed copy of the report made to the commissioners on the result of the experiments, from which it appears the result was satisfactory. Mr. Bird, on the assumption that the experiments were a failure, stated that he "in April or May last saw the pipes broken to pieces and taken out, after putting the public to the useless expense.' Now, the fact is, that

* See p. 441 *ante*.

* The correctness, too, of some of the information furnished has been impeached by a writer in the *Times*. He says of the sections of the strata in various existing wells:—"To refer, for instance, to the thickness of the London blue clay at Goding's brewery, Southwark, it is stated to be 169 feet thick, when it is only 100 feet; the surface of the chalk also is indicated at a depth of 190 feet, when it is 245 feet. Another of these sections indicates the thickness of the blue clay at Messrs. Thorne's brewery, Westminster, to be 163 feet, when it is only 100 feet, and the chalk is stated to be 202 feet from the surface, when it is 230 feet. The section of Messrs. Seagar's, Millbank, showing the thickness of the blue clay 93 feet, is correct; and, being within 100 yards of Messrs. Thorne's, proves the inaccuracy of the latter, as the surface of the blue clay is of pretty uniform and gradual dip towards the west in that portion of the metropolis. I could make further comments, particularly on the anomaly of showing the blue clay resting on the chalk, when it is well known that a considerable thickness of plastic clays and sands invariably intervenes; it is, therefore, surprising to have such incorrect data issued from the Commissioners' office, which tend to throw a distrust on the whole, and are calculated to create erroneous impressions respecting the geological formation of the London basin."

† We have received beyond those given in the list, plans by Messrs. Bardwell, C. Ellerman, R. Netherway, &c.

the experiments having been completed, and the commissioners having other works in the neighbourhood, where 12 inch pipes were required, the pipes in Upper George-street were used instead of purchasing new ones, to *save the public expense.*"

We will also add, respecting the ventilation of sewers, part of a note from the surveyor to the Hull corporation, Mr. D. Thorp, forwarded to us sometime ago, and accidentally mislaid. Mr. Thorp says,—

"In the first place I may mention that I have trapped 360 gully holes in the old town of Hull, which is that part of the town within the docks and harbour, and within that area, which comprises 87 acres very closely built upon, we have about 180 more to complete.

"Now, it required much consideration in doing this to get rid of the effluvia which would naturally be pent up in the sewers as we proceeded trapping, and which was fully proved by my men not being able to proceed in the first outset with more than one street at a time, and then not without being ill. This induced me to apply the provision made in one of our bye-laws, viz., to compel all parties to *connect the rain pipes in the fronts of their houses with the main sewer, by means of either brick or tubular glazed drains* (the latter of which are much to be preferred), thereby making so many flues for the escape of foul air to the tops of the houses, and I may say that this plan has acted admirably."

After the foregoing article was in type, we received a list of the parties, thirteen in number, to whom the new commission has been directed, and here it is:—Viscount Ebrington; Major-General Sir John Burgoyne, K.C.B.; Sir Henry de la Beche, F.R.S.; Mr. Robert Stephenson, M.P.; Mr. S. M. Peto, M.P.; Lieutenant-Colonel Alderson, R.E.; Mr. Philip Hardwick, R.A.; Captain Vetch, R.E.; Mr. J. M. Rendel; Captain Harness, R.E.; Mr. Thomas Hawes; Captain R. K. Dawson, R.E.; and Mr. Edward Lawes, Barrister-at-law.

It will be seen that all the more prominent opponents on each side have been omitted in the new arrangement, the number of commissioners has been reduced, and the correctness of our views has been unconditionally recognised by the infusion of professional and practical men,—the abandonment of the absurd principle that architects and engineers were not fit for Sewers' Commissioners, simply because they *were* architects and engineers. The builders, too, are represented. Of the credit of obtaining this result we claim no small share: we fought the fight alone,—so far as we know, no word upon it has been elsewhere uttered, and we venture to think, with all modesty, that the profession owe us thanks.

Beyond what we have said we offer no opinion at present on the goodness, or otherwise, of the selection, or as to the omissions, but wait to see the working of the board.

Birmingham Workhouse Competition.—Were your correspondent, as he styles himself, "A Lover of Fair Play," he would have hesitated before making such statements as those contained in his letter, appearing in The Builder of the 29th ult.; but as his assertions may gain credit with some parties, if suffered to pass uncontradicted, I beg to say:—1st. That I most emphatically deny ever having canvassed the Birmingham Guardians in favour of Messrs. Drury and Bateman, either during the first competition, or at any other period, and challenge him to produce or name any one guardian so solicited by me. 2ndly. That I saw *no signature or name* upon the plans, except the motto appended. 3rdly. That the selection was made, in every respect, in *strict accordance* with the instructions of the guardians.—Charles Edge, Birmingham, October 3, 1849.

ON CIVIL ENGINEERING AND ARCHITECTURE.

AN INAUGURAL LECTURE.*

I have said that both architects and engineers must possess a knowledge of the strength and nature of the materials with which they have to work. This I think is self-evident, for the money to be expended is always one great element in their calculations; and the quantity of materials that can be usefully employed can only be ascertained by calculations based upon an intimate knowledge of the strains and forces they will have to resist, and the capabilities of the timber, the stone, the iron, or other substance that may be employed to resist them. Both Tredgold and Barlow have furnished us with admirable works from which the theoretical knowledge of the properties of all the materials used in building can be learned. There is no excuse, therefore, for failures of work arising from actual want of strength; but failures do sometimes occur, notwithstanding every precaution may have been taken to give to the materials, both theoretically and practically, their proper size and form, and proper distribution in the work. In engineering especially, circumstances are occurring every day, features constantly present themselves, of which even the oldest practitioner may have had no example previously; and other means taken to obviate evils that may and do thus arise may be the best that both science and art could point out, and yet fail in their object. I say that these are misfortunes only, not faults; but when they occur with a man unqualified with scientific knowledge to deal with them, they are very serious faults indeed, and should be visited with the utmost censure. Engineering is of all professions (says Mr. Hyde Clarke), the military excepted, that in which a new adaption of expedients to unforeseen occurrences is ever most imperatively required, and in which a mere knowledge of past efforts will be insufficient, unless the mind be competent to invent new processes, as well as to avail itself of the best manner of old ones. No man can go upon a spot and say, I will do such and such things at such expense; some unexpected variation of nature beneath the surface will often thwart the best-calculated plans, and render all attempts at economy abortive. It is practice, aided by scientific knowledge of the highest kind, that only can properly preside over the just application of materials to the ever-occurring variations which spring up in the course of an engineering undertaking. And if science and practice sometimes fail in effecting their object at once, what must be the result when ignorance attempts the work? Failure, certain and disastrous failure, heaping disgrace upon the head of the quack practitioner, and often ruin upon his employers. I use the word advisedly, for although neither architects nor engineers unfortunately need diplomas of practice to give them a right to the use of C. A. or C. E. after their names, they yet have morally, and in common honesty, an obligation, which should bind them to certain spheres of work which they feel themselves qualified to undertake; and every man knows his own capabilities, depend upon it.

If, then, men calling themselves engineers or architects, undertake a work they know they are incapable of performing without the assistance of a dry nurse, in the shape of a good "clerk of the works," they are quacks in every sense of the word, quacks as much as the charlatan who practises medicine without the consent of the colleges.

The demand for engineers, caused by the late wild railway speculations, has filled the profession with unqualified persons, and has tended to lower it below its proper level, and although the present times are, I am rejoiced to say, weeding them out pretty fast, it will, and must, be some time before it reaches its healthy state again.

It is true, the Institution of Civil Engineers and the Institute of Architects exist, and men to become members of either must present proper qualifications; but there are numerous practitioners who are not members, and who seek and gain employment. But I hope to see, ere long, by legislative enactment, both architect and engineer obliged to take out a diploma before being allowed to take upon themselves the responsibility of any work, when lives, or a sum of money beyond a certain amount, are at stake,—a diploma granted only after a severe examination as to scientific acquirements, and a practice under others of at least seven years.

I here beg permission to quote some passages from a paper written by Sir John Soane, which appeared in the *Artist* of June 13th, 1807,—as quotations from this high authority will give strength to what I have ventured to suggest myself:—

"An artist (architect), strictly so considered, is not sufficiently employed; his profession is too open to the assumption of persons who have no claim by education or ability; and these are admitted to that patronage without which the architect has no chance either of emolument or fame. There are, therefore, very few persons engaged solely in the practice of architecture. The great mass of those whom we here call architects, though many of them respectable in talents as artists, are under the necessity of combining with their study of the science pursuits not strictly analogous, and are, in consequence, and to their great discouragement and mortification, assimilated with another description of professional men called surveyors,* and that name is again assumed by sorts and classes of building workmen and others, until it becomes utterly contemptible."

After enlarging somewhat (and in language by no means mild) upon the difficulties which beset an architect when carrying out a design, through the interference of public boards, and complaining, justly, that unqualified persons are allowed to enter into competition with him, by the aid of pilfered plans, Sir John concludes thus:—

"Before the state of architecture can be improved, and the professors excited to that species of emulation which only can make them eminent, strong and marked distinctions must take place. Those who have patronage must consider it a sacred trust and deposit,—the meed only of science and genius. The claims of the untaught, ignorant, and presumptuous, must not only be disallowed, but repelled with indignation and contempt, till at length they are consigned to that obscurity whence they ought never to have been suffered to emerge."†

Both engineer and architect must also be men of business; and to the knowledge of the uses and relative advantages of materials must be added the knowledge of their commercial value. The sum to be expended in any undertaking is always a marked feature; and the reputation of an engineer, especially, will be raised by the commercial success of his work. Harbours, roads, canals, and railways, before they are commenced, must show that the traffic or dues from them will amount to such a sum as will insure to their projectors a proper return for their money. The first estimate of the engineer is the document from which the probable amount of returns is calculated. The statistical calculations, or the quantity of trade that will arise, is not, strictly speaking, in the department of the engineer, and he is not answerable if the scheme is not a paying one, from a deficiency in the traffic returns or dues: but if it fail through any excessive expenditure over and above his estimate, he is answerable.

His estimate and schedule of prices, fixed through knowledge of local charges and custom of labour—through his close observation and acquaintance with the geological nature of the spot, and through his knowledge of the best districts from whence to draw his foreign materials—must be so worked out in detail, and capable of being referred to precedent, if precedent exist, or borne out by the opinion of others, that it will bear the investigation of a Parliamentary Committee; for, be it remembered, that estimates are the most vulnerable points in which opponents can strike you in the "House;" and if the said estimates do not carry on the face of them the handiwork of a man of business, they will be the first and last work of the scheme, for the session in which they are brought forward at all events.

Perfect knowledge of the business habits of contractors, and of the working habits of arti-

* By Mr. Clegg, at the Putney College. See p. 472, *ante*.

* A comment seems called for here, but we have not time to make it.—Ed.

† This is the right test; not a mere *name*.—Ed.

zans, can alone enable him to draw out his specification properly. It is true the lawyer will be called upon to give to it its legal phrases and finely-drawn pains and penalties of any breach in the performance thereof; but the lawyer will have to work upon a base of the engineer's planning, and, be sure, the blame will rest on him, if any oversight has been committed on his part.

In the specification must be described the exact method by which the various works enumerated therein are to be performed. All the drawings must be enumerated, and more particularly referred to and explained: in short, the specification must be a book of reference, as it were, for the contractor, by which he can settle dimensions, quantities, and appeal to, in case of any dispute with his employers, as to the proper performance of his duty. There can therefore, I think, be no doubt but that the engineer must be a thorough man of business.

Because I have not alluded in these examples to the architect, it must not be supposed that such documents as estimates and specifications are foreign to his practice, for, equally with the engineer, must he be capable of directing the *modus operandi* of his undertaking,—nay, even probably with still greater minuteness of detail, seeing that his work is generally more minute, and depending more particularly on exact dimensions for its success.

Both architects and engineers must also understand those branches of law which relate to their profession, and study the science of jurisprudence, so far as to enable them to judge of the legality of their proceedings, to prevent their employers from being involved in lawsuits through their means, and to extricate them by the shortest way when so involved, by a cessation or alteration of the offensive operations, if the cause be connected with their pursuits. I mean not their duties should in any way trench on those of the attorney, or that they should advise in any matter involving a legal or technical question, for "a little law is a dangerous thing;" but they should always understand the particular sections of the law relating to their operations, that they may be able to steer clear of the dangerous rock of litigation.

All the laws of England contain enactments and regulations concerning building, and they consist both of written laws or statutes, and unwritten laws, or laws of common customs. It would be out of place here to describe all the laws which affect the operations of an engineer or architect, but I may be pardoned for making mention of one or two points that have come within my experience, to serve as illustrations of my statement, that they should know "their own law."

For instance, when the inhabitants of a county are liable for the repairs of a public bridge, they are liable also to repair, to the extent of 100 yards, the highway at each end of the bridge. One instance came under my observation, in which a surveyor neglected not only to take into account the existence of that law in his estimate of the work to be done, but even through his ignorance suffered an action to be brought against himself, as the representative of the county. He lost the action, and the magistrates refused to bear him harmless, "because he ought to have known the law."

I may mention another instance in the case of a bridge. An engineer was employed by a private gentleman to build a bridge for a public road upon his estate: two years after its completion it was washed away by a flood. It had become so useful to the public that it was necessary to have it rebuilt, and the owner then thought that it might be erected at the expense of the county. But the county refused, because his engineer had not submitted his plans to, and obtained the approval of, the county surveyor.

An architect designed and erected for a gentleman a very expensive conservatory, and it was made portable, for as this gentleman was only a yearly tenant, he intended to remove it should he change his residence. But his architect erected the conservatory on a brick foundation: it thus became a fixture, and the property of the landlord.

Examples of such cases might be repeated until the relation of them might fill a considerable volume, but those mentioned will serve to show that the artist employed to execute any works should inquire concerning the laws relating to them.

I have now said as much as the limits of a lecture will allow, upon the duties required of architects and engineers, and I will say a few words upon the duties of the general community with regard to architecture more especially.

If we refer to history we shall find that exactly in proportion as civilization advanced architecture flourished—had its rise, its progress, and decay. It took its styles, its varieties, and its tones, from the nations who invented or introduced it, and what may be called, with great propriety, a national style, always existed.

Greece, during her independence, invented that architecture which, even at the present day, is our model. Her princes und rulers esteemed it the highest honour to be ranked with artists, and her buildings were looked upon by all as types of her glory.

Republican Rome, although she borrowed her designs from Greece, and built by the hands of Grecian artists, cherished architecture, because, through it, the eternal city might be embellished, and the dignity of its citizens be enlarged, and although this did not, perhaps, arise from pure love and veneration of the art, it had its effects, and buildings were produced that have been handed down to us as forms worthy to be imitated to the present day.

The architecture of England also had its rise, progress, and decay. Its rise during the Anglo-Normans, its progress during the reigns of the Plantagenets and Tudors, when it arrived at the greatest excellence, and its decline may date from James I. (if we may include the Elizabethan, which, although not indigenous, has become, and perhaps deservedly, a favourite style in England), almost up to our own times; I say almost, for latterly, under the fostering patronage of royalty, and men of taste and genius, it has struggled into a new existence: let us hope that it is the dawn of a new era for architecture and the fine arts in England. That this germ may bud and grow into healthy beauty, it will require the steady co-operation of all Englishmen connected in any way with architecture. Genuine professors of the art will gladly give their best energies to the task of regeneration, and we have already examples which tell in glorious language (language engraven in stone) what will be the result of those energies. Nothing is wanted but men of influence and taste to add weight to the balance already inclining so decidedly in favour of purity and fitness of style.

I am an advocate for fitness in the style of architecture of every building, civil, military, or ecclesiastic; and would those through whose patronage the fine arts flourish study, equally with its professors, the true meaning and intent of fitness, there would speedily be an end to incongruity, and English buildings would stand prominently out as types of English architecture.

Both Grecian and Palladian architecture have taken so firm a root in the soil of England, that any attempt to dismiss the styles at once would be useless, and perhaps fatal to the regeneration of a national one. But will not a little consideration show that these styles are unfitted for the English climate throughout the year? The windows, few and far between, obstruct the light. The low pitched roofs retain the snow and rain, and the projecting porticos throw shadows, where there is already too much shade. An Italian villa, appropriately situate, may fitly serve as a summer residence, but we must seek in another style that comfort and homeness so loved by all Englishmen: for this style we need not become imitators or pilferers from a foreign nation.

The high pitched roof, the ornamented gable, the oriel window, the irregular plan, suitable as well for internal convenience as for external beauty, are all characteristics of our English style, and each feature has, besides, fitness to our climate to further recommend it. I wish particularly to be understood that I now speak of domestic architecture,—for that of public edifices we may still be indebted to Greece or Rome.

Our palaces, institutions, and prisons may still be in the decorated Corinthian, the chaste Palladian, or the stern and sombre Doric. But let our residences, our *country* residences, serve to keep us in mind of our former genius, while they add to our comfort and enjoyment.

One word more before we leave this subject, upon a point which every man has power to forward. I allude to internal decoration. In this branch of art the house-painter, the paper-hanger, and the joiner, are too often allowed to usurp the place of artists, and suffered to bedaub the walls with incongruous colours, or tasteless wood-work. Joiners, in particular, have a kind of systematized patent to work evil things; custom to one set of forms and method of work, has so fixed itself upon us, that the same set of moulding planes, the same kind of paneling, serves for all styles of houses. The architect himself is probably somewhat to blame in this, but I believe only to a small extent, for builders, not architects, are generally employed to run up the brick and stucco boxes called houses, and these, building either per contract, or for themselves, to save money and trouble, are little inclined to study propriety in internal finish. It is not that the architect considers it to be beneath him to be the decorator; for Raffaelle painted the walls of the Vatican, Rubens' hand embellished the ceiling of Whitehall, Sir James Thornhill decorated the walls of the chapel and hall of Greenwich, and we have Owen Jones in our day.

It cannot, therefore, be through any false notion of the architect that these internal finishings are left to artizans, but whether it be or not, every gentleman, every man of cultivated mind is to blame who suffers his house to be coloured up to suit the taste of the sign painter, who without any feeling of art in his composition daubs away in any shade of any pigment he may fancy to be in fashion.

Many patrons of the arts would fire up and say indignantly, "I do not suffer this outrage upon taste to be committed in my house." And I am only happy to admit that there are some glorious exceptions to my rule, but that they are exceptions I will uphold, and say confidently that eight out of ten have houses painted, fitted, and furnished, with designs that have issued from the shop, and not from the studio.

Poor men in the present state of things cannot, perhaps, help this; and the poor man with refined feelings for art must submit, for he cannot alter.

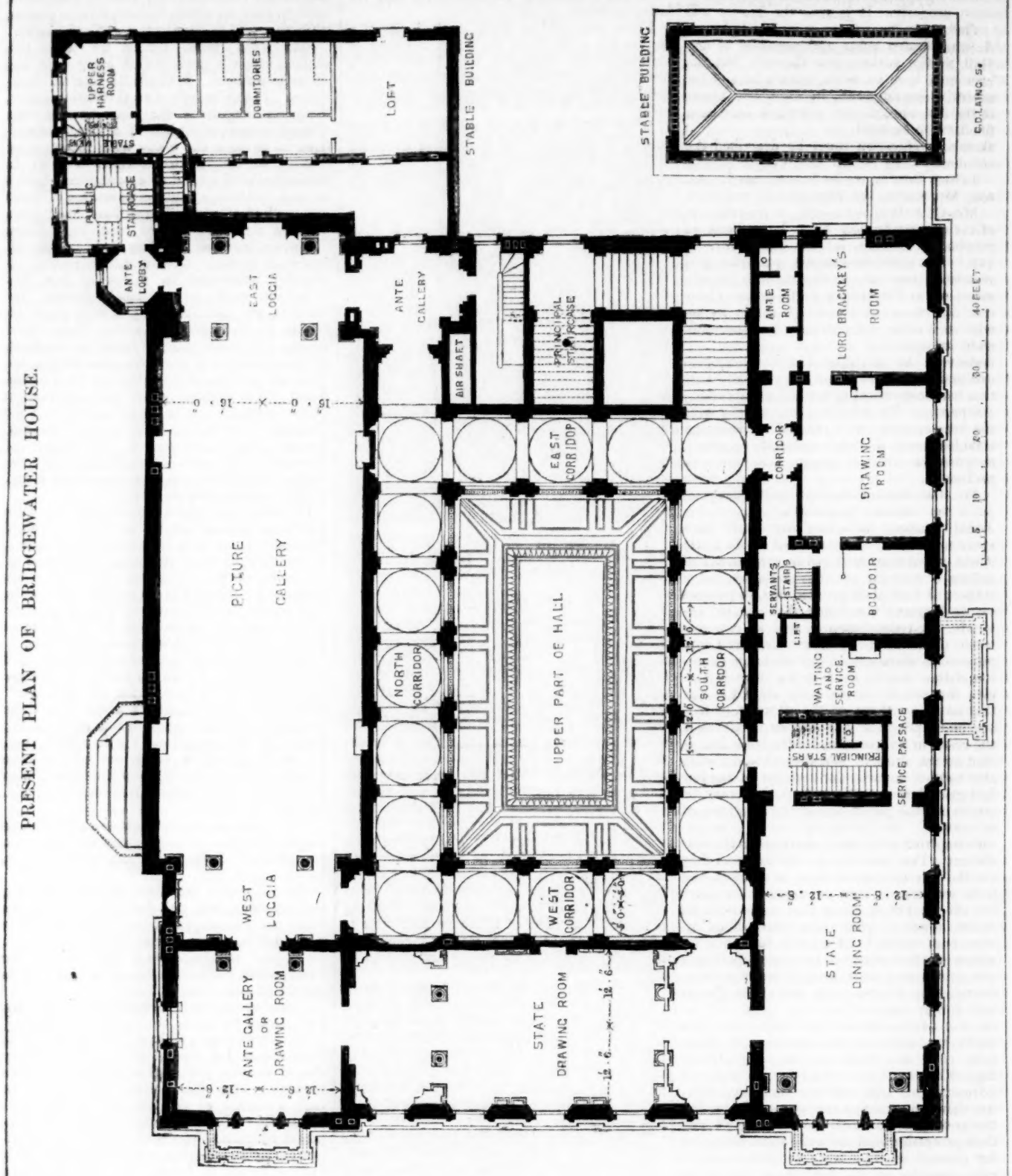
But rich men are those to whom I point, and say, study art, and be judges yourselves where art is employed, or consult those whose whole life has been devoted to the cultivation of it, and who will work for you, not for money alone, but for the love of art: architects should be such men.

[After an outline of the system of instruction he intended to follow, the lecturer continued,]

It is likewise my wish to make all the students familiar with the use of tools, and that they should become practical as well as scientific workmen; that this is essential, I have the high authority of the late Mr. Telford, who has said,—"Youths of respectability and competent education, who contemplate civil engineering as a profession, are seldom aware how far they ought to descend in order to found the basis of future elevation. It has happened to me more than once, when taking opportunities of being useful to a young man of merit, that I have experienced opposition in taking him from his books and drawings, and placing a mallet and chisel or a trowel in his hands, till, rendered confident by the solid knowledge which only experience can bestow, he was qualified to insist on the due performance of workmanship, and to judge of merit as well in the lower as in the higher departments of a profession in which no kind or degree of practical knowledge is superfluous."

A NEW SORT OF CHURCH ORGAN has been constructed, in two parts, one for each side of a window. The exterior, says the *Daily News*, is architectural, and of the colour of dark oak. Each of the two compartments is 26 feet in height, and the bellows are so arranged as to admit of their being placed under the window, which is to appear in the centre. The object of the designer, a Mr. Walker, has been to construct an instrument combining the advantages of a German organ with the principles of the extended compass on the Manuals.

PRESENT PLAN OF BRIDGEWATER HOUSE.



THE ALTERED PLAN OF BRIDGEWATER HOUSE, LONDON.

We have been asked to give some information concerning the alterations which have been made in the internal arrangement of Bridgewater House, Cleveland-row, and cannot better comply with the request than by annexing a plan of the house as it is now proposed to be completed, which may be compared with the original plan given in our last volume (VI.), page 474.

It will be seen that a central hall has been formed, and the principal staircase moved to the side. The chief motive of the alteration is understood to be a desire to render the gallery and its approaches independent of the rest of the building, it being Lord Ellesmere's intention to afford the greatest possible facilities to the public for visiting his fine collection. A separate staircase has been constructed, with this end in view, at the north-east corner, and is surmounted by a campanile.

The entrance to the central hall is under the apartment marked "service-room" on the plan.

We have received an ill-natured account, signed an "*Employé* of Mr. Barry," of what the hall is to be when finished; but being satisfied that, notwithstanding his signature, he writes in ignorance, as well as ill-feeling, we make no use of it.

The following, from a second correspondent, is fair criticism, to which we have no right to refuse a place:—

"With respect to the alteration in Bridgewater House, it might, in my opinion, have been better contrived. According to the first plan, there was no inner central hall on the ground-floor; now, on the contrary, there is too much,—one so disproportionably spacious and lofty, that, with the exception of the picture-gallery, all the rooms must look small by comparison with it,—that is, much smaller than they need do, or would have done, according to the first arrangement. Another objection is, that, on its being first entered below, just as much will be seen as after ascending the staircase. Perhaps it would be better were the corridors to be partly enclosed, so as to leave only eight of the sixteen arcades open to the upper part of the hall, viz. three on each side and one at each end, which might be done not by stopping up those at the angles, but by merely glazing them with ornamental diapered or mosaic glass, in patterns of various colours; in which case the corresponding arcades below, if the corridors on the ground-floor be also quite open to the hall, ought to be closed up solid. That would confine the space sufficiently, and instead of the whole being disclosed at the first glance, parts would come into view successively,—would, after first appearing, disappear, and then appear again. It is not every architect that has a *forte* for *plan*—for so 'laying out' a mansion as to secure various effects by means of piquant contrasts, transitions, and combinations. Z."

THE ARCHITECTURAL ASSOCIATION.
OPENING CONVERSAZIONE.

ON Friday evening, the 5th instant, the Architectural Association met in Lyon's-Inn Hall, Strand, to open the session.* The walls presented a fair show of drawings, including several series of the sketches made by members of the Class of Design; and the room was well filled. The advantages resulting from this sketching class will be great: it should be sedulously attended by the younger members.

Letters were announced from Mr. Donaldson, Mr. Scoles, Mr. Tite, &c.

Mr. G. J. Wigley, secretary, read the report of the council, from which it appeared that the number of members had increased from 97 to 140. The committee urged the value of unrestricted interchange of opinions amongst the members, and showed the advantage that was resulting from all becoming well acquainted with each other. An attempt to form a book-club, it appeared, had not succeeded. The endeavour to establish a free architectural exhibition was very successful, and the collection had been visited by a daily average of about 500 persons. They had taken upon themselves the responsibility and risk of its permanent establishment, and they anxiously sought the concurrence and co-operation of the whole profession.

Mr. Christopher Creeke read a very able paper on various matters affecting professional practice, to which we shall devote space next week. In the course of the address it was stated that steps had been taken towards calling a meeting of the profession on the subject of Competition, and that every architect in England would be communicated with.

Mr. Godwin, being requested to make some observations, said the course he had pursued in respect of the Association from its foundation would, he thought, lead them to give him credit for sincerity when he stated that he was much gratified at hearing of its successful progress, and more than this, seeing the result of its operations. Many of the papers read on the alternate Fridays were most creditable to their authors, and in several instances had gained for them, as he was able to say positively, the good opinion of a large number of persons. But it was not merely at these meetings that good was done through the Association. The sketches on the walls produced on the intermediate Fridays, from given subjects, were exceedingly satisfactory evidence of the efforts of the members in another direction. Apart, however, from these proceedings, advantages resulted from association in the abstract. It seemed to him important that in our doings we should consider how they would operate on others,—that we should regard not simply their effect on ourselves, but on the well-being of our order, and this we were led to by such associations. We should find that in upholding the dignity and high character of the profession, we were best advancing our own individual interests. Never was there a moment when it was more important that architects should unite to set themselves and their profession right with the public than now; for pressed as they were on either side by circumstances of the time, their position was seriously threatened. The works of the architect, the value of design, were not recognised rightly by the public. A little matter which came under his observation a few weeks ago (and a straw might show the current) would in some degree illustrate this. An individual asked a young architect to make him "a little design" for a summer-house, and having obtained his charge for it, called upon him (the speaker) to know if the sum of two guineas, which the architect had named, was not *too* much for merely "a few lines and a bit of colour." He need not say what his answer was. But what he wanted to remark was this—that the same individual sent the drawing to a lithographer, wishing to distribute copies of it, and being charged three guineas for putting it on the stone, paid it with perfect satisfaction! The mere act of mechanically copying he could appreciate, but the value of the productive power, and the propriety of paying for what seemed such pleasant amusement for the artist, he did not understand. Architects had done much to induce this feeling and lower the character of the profession, by their indiscriminate compliance with invitations to compete, without those regulations which would ensure them justice. It gave him much pleasure to hear of the steps which had been taken by the Association towards following out the suggestions published in THE BUILDER, with the view of obtaining a proper management of competitions. The late Birmingham Union competition was a case in point, where the successful architects, after having risked the chance of getting nothing for their time and skill, had been coolly offered about 3 per cent. on the amount of their estimate. He sincerely trusted that the architects would, under the circumstances, resist any departure from the customary remuneration.* The customary remuneration! This was another point which imperatively needed settlement; and if the elder members of the profession were too much occupied, or disinclined to take steps in the matter, he hoped, when the Association had succeeded in putting competitions on a proper footing, that they would turn their attention to the question of remuneration. The speaker then alluded to the excellence of the paper which had been read by the president, and moved a vote of thanks to him.—Carried.

Mr. Papworth afterwards briefly addressed the meeting, taking up the question of a "new style," mooted by the president, and urging with ability, that all that could be expected of architects was the re-combination and thoughtful application of the modes before us, with the adaptation of modern improvements and appliances, to the wants and purposes of the day.

* "The objects of the Architectural Association are, the advancement of the study of design in Architecture, the development of true principles of criticism, and the affording means whereby the student may acquire an aptitude for the application, recombination, and extension of the present materials of the art. For the attainment of these objects, the business of the Association is to consist of the production of designs for previously determined subjects; the reading of papers on the several branches of science and art, comprehended under the term Architecture; free and open discussion; and the contribution to the Society's portfolio of subjects, displaying either originality of design, examples of construction and decoration, or modes of representation."

* The architects have accepted the second proposition of the guardians, namely, 4 per cent. upon the cost of the building—that sum to cover the premium of 250*l.*, the superintendence of the erection, &c., but exclusive of the remuneration to the clerk of the works. In reply to some architects who express their anxiety to call a meeting of the profession in that town, on the subject of competitions, we would suggest a postponement for a short time.—ED.

GAS AND HEALTH IN WARE, HERTS.

THE Gas Company in Ware charged 8s. per 1,000 feet. A new company came into the town, and offered, if a certain number of persons would agree to deal with them, to construct works and supply gas at 6s. per 1,000. A meeting was called, and the old company were applied to, to know if *they* would supply it at that price, as in that case no encouragement would be given to the new company. They refused. The new company have constructed their works, and the old company are now offering gas at *four* shillings per 1,000 feet,—too late, however, the new company having, of course, obtained a written agreement from many of the inhabitants to take their gas, before the works were commenced. The relation of this occurrence may not be without its value to other Companies if they will consider it wisely.——A local board of health has been appointed here under the Health Act, and are getting to work, though, perhaps, not very vigorously at present. There was a considerable struggle at the election,—the turning point being, as it has been in some other places, "who should be *clerk* to the board." How this has operated in Ware we are not in a position to say,—the best men for the purpose may have been elected for anything we know to the contrary,—but it must be obvious that if the qualification for members of local boards is to be simply a determination to support Mr. A. as clerk against Mr. B., or *vice-versa*, the reverse at times must be the case.

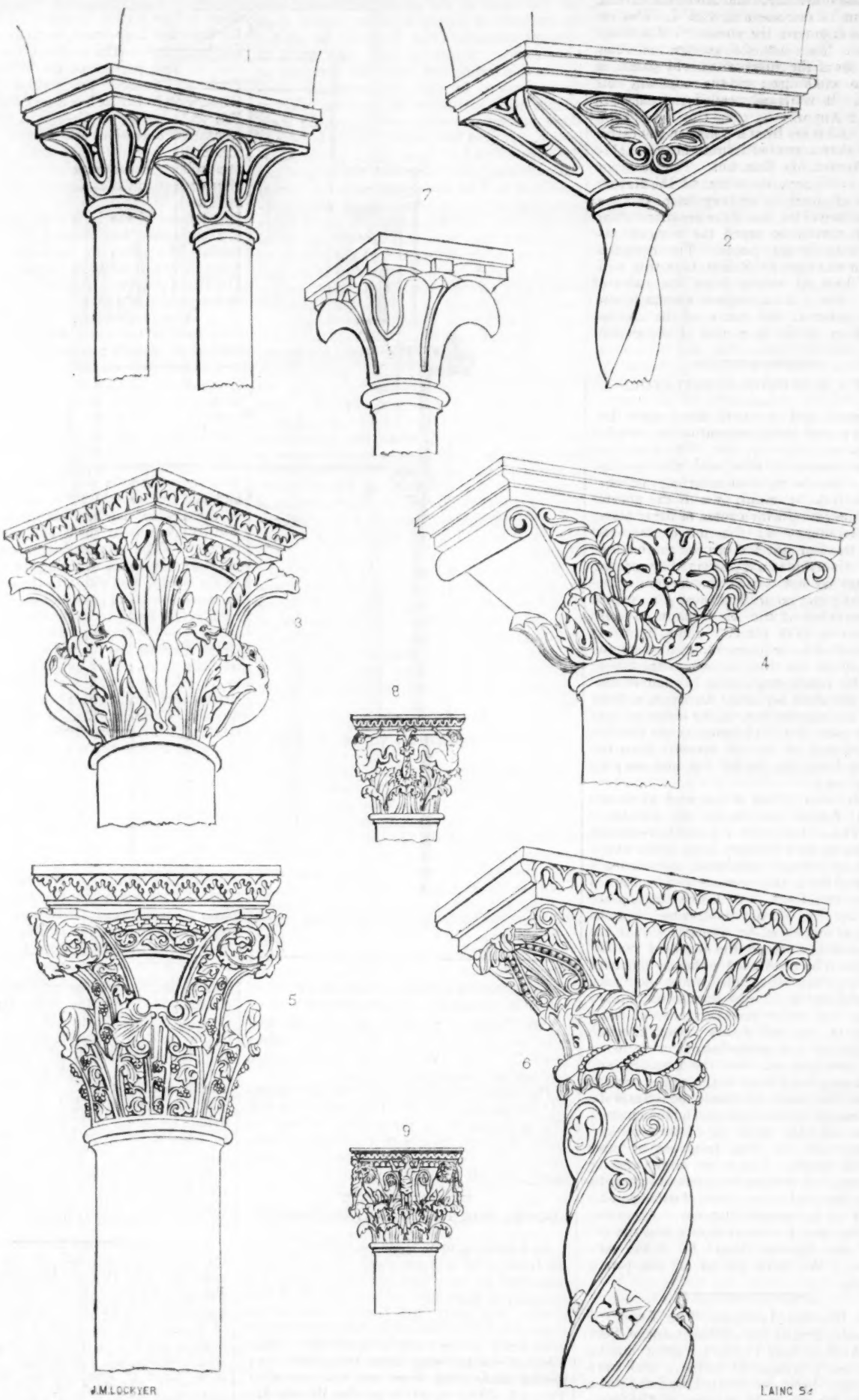
THE IRON TRADE.—Several of the usual quarterly meetings have been held, but the masters have deemed it advisable not to advance the nominal price previously fixed, namely, 6*l.* per ton for rods and bars. The small makers are reported to be in pretty full work for home consumption, but on the whole the trade is represented to be not in the most satisfactory condition for the manufacturers.

RAILWAY JOTTINGS.

THE raising of the tube at the Britannia-bridge, Menai Straits, has been resumed, and there is now a clear height of 55 feet between the tube and high-water, so that small vessels sail beneath.——The contract for the formation of that portion of the Whitehaven and Furness Junction line which runs from Broughton to Bootle has been taken by Messrs. Fell and Joplin, of Greenodd, who intend to commence operations immediately, to be completed by April.——The total loss on the atmospheric experiment on the South Devon, after deducting the estimated value of materials on hand, is said to be 351,000*l.*——The foundations of the iron bridge over the Ouse, at Huntingdon, were commenced on Thursday week. The piles, or cylinders rather, are being driven, it seems, under a modification of Dr. Pott's process. Those forming the piers or supporters of the arches are about 9 feet long, and 4 in diameter. One of these having been sunk in the river, another is placed on the top of it, with a cap on the head of that, and all are made air-tight. Two large cylinders on the shore are then exhausted of air, and on turning a tap in a tube connecting them with those in the river, the air is suddenly transferred from one to the other, when the pressure of the atmosphere causes it to descend with considerable rapidity. In each case on Thursday, the tube was driven in 6 to 7 feet; and this process will be repeated till they are at the proper depth, when the water and soil will be taken from them and concrete introduced.——The engine-drivers on the Great Western have been receiving for the last five or six weeks, in addition to their wages, about 8s. a-week each as premium on the amount of coke saved by them below that fixed by regulation.——The wages paid to enginemen are:—Great Western, 5s. 6d. to 7s. 6d. a-day; Midland, 5s. to 7s.; York and North Midland, 4s. to 7s.; London and North-Western (Manchester and Birmingham division), 5s. to 7s.; Eastern Counties, 5s. to 7s. 6d.; North British, 5s. to 6s. 10d.; Edinburgh and Glasgow, 3s. 6d. to 7s.; Perth and Dundee 4s. to 8s. The enginemen of the York, Newcastle, and Berwick have entered into a union to obtain—For merchandise and passenger traffic, 6s. for first year, 6s. 6d. for second, and 7s. afterwards. Those proposed by the company are—5s., 5s. 6d., 6s. 6d., and 7s. respectively. ——The Great Western to Windsor was to be opened from Slough to Windsor on Monday last.——The works on the South Wales between Newport and Gloucester are going on rapidly: permanent way is being laid.——Two arches of the viaduct of more than fifty arches over the river Calder, near Whalley, on a branch of the Bolton, Clitheroe, and West Yorkshire line, gave way on Saturday last. The centres of several of the arches had been withdrawn on the previous day. Three lives were lost by the accident.——The survey of the intended line for Madras has been completed 13 miles, and the results, it is reported, are favourable, so far as regards engineering details. The road is almost level. ——The calls advertised for October amount to 1,046,749*l.*: 11,106*l.* are on account of foreign companies. For the corresponding month of last year they were 1,693,655*l.* The total calls for the first ten months of 1849 now amount to 17,700,964*l.* against 30,072,610*l.* in 1848.

WORKING CLASS CLUB-HOUSES.—The bakers are likely to have the honour of setting the first class example in carrying out the principles so long advocated by THE BUILDER, and successfully set agoing by the society for improving the dwellings of the industrious classes. A meeting of master and journeymen bakers was held on Monday week, at King's-cross, when it was resolved to have a building, with fifty or sixty bed-rooms, to be let at 2s. a-week each, with warm and cold baths, the former at one penny, and the latter one halfpenny each. All the daily newspapers and a select library to be provided, with a reading and coffee-room. The expenses were estimated at about 300*l.*, and the income at about 365*l.* per annum, leaving a balance in favour of the speculators of 65*l.* The assistance of the parent association was fully anticipated.

BYZANTINE CAPITALS.



BYZANTINE CAPITALS.

Nos. 1, 2, 4, and 6 are from the centre and more ancient cloister of the monastery of Santa Scolastica, near Subiaco. The monastery was founded in the fifth century: the portion from which these capitals are taken dates from 1052, and is, therefore, one of the earliest examples of this style in Italy. It is similar in arrangement to the more recent cloister at St. John Lateran, at Rome, save that single shafts are more frequently used than double ones to support the small arches of the covered ambulatory. It was in this monastery that the first printing-press in Italy was established, in the year 1465. No. 6 is a particularly rich example. Nos. 3 and 5 are two specimens taken from the columns supporting the large pulpit in the cathedral of San Pantaleone, at Ravello, now only a small town near Amalfi, but once a flourishing city of 36,000 inhabitants. The pulpit itself is a magnificent pile, of white marble, nearly 14 feet in height, blazing with mosaics, with every possible member richly

sculptured. It is supported on six columns, the shafts twisted and inlaid with mosaic bands. These columns are carried by six marble lions in marching order, three and three; the carving throughout is delicate and varied. The capitals now engraved are about 1 foot 3 inches in height. The date of erection is 1260. No. 7 is from the ruins of an old palace of about the same date, closely adjoining the cathedral. It is usually called the palace of Charles of Anjou.

Nos. 8 and 9 are from a pulpit in the cathedral at Salerno, erected about the year 1170 by the Archbishop Romoald. The execution of these caps is superior to that of the Ravello examples of nearly a century later, and is a good specimen of the use of the peculiar *drilling* that characterizes so much the works of the Greek artists of the period. The cathedral at Salerno was built by Robert Guiscard, with materials brought chiefly from the ruins of Pæstum. No. 8 is an elegant specimen, and partakes rather of the fancy of the cinquecentisti than of the workmen of the twelfth century.

THE AIR SYPHON VENTILATOR.

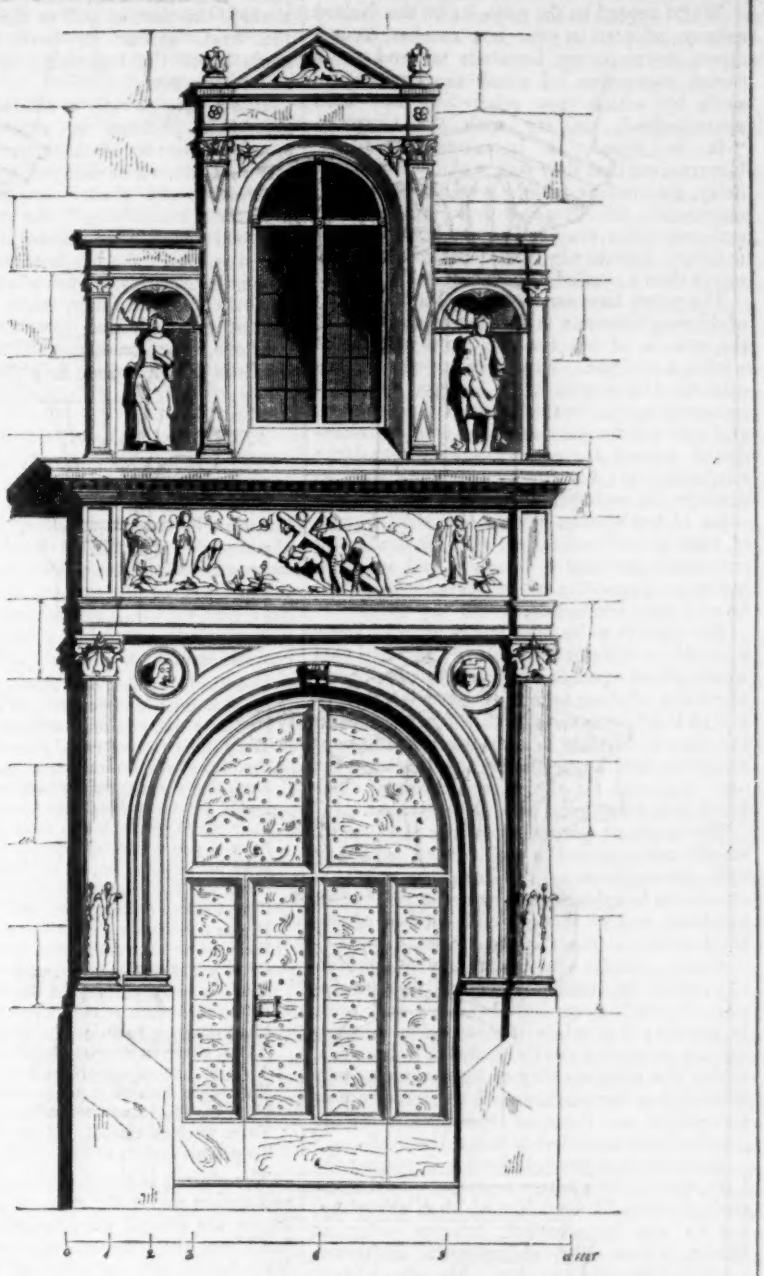
We mentioned a short time since Dr. Chowne's patent mode of ventilation founded on his asserted discovery that, "if a bent tube or hollow passage be fixed with the legs upwards, the legs being of unequal lengths, whether it be in the open air, or with the shorter leg communicating with a room or other place, the air circulates up the longer leg, and that it enters and moves down the shorter leg; and that this action is not prevented by making the shorter leg hot, whilst the larger leg remains cold; and no artificial heat is necessary to the longer leg of the Air Syphon, to cause this action to take place." Thus, by using the chimney of an ordinary room, for example (into which air has free access), as the longer leg, and by conducting a tube or channel constituting the short leg of the Air Syphon, from any part (as near the ceiling, for instance), into the lower part of the chimney, at the suitable place, a stream of air will proceed from the apartment down the shorter leg, and away up the longer one.

The *Illustrated News* of last week gives two diagrams, farther elucidating the patentee's views. These show that a portable ventilator may be set up on a chimney piece, in the shape of a vase, or column perforated, and having a tube carried from the bottom, and continued into the chimney.* "In assembly-rooms, even where fire is not used, which become over-heated and close, to whatever part of the room rout-forms extend, the means of ventilation can also be conducted, either by channels (as light zinc tube) suspended under the forms, or by making the forms themselves hollow channels. In either case this channel being made continuous, and finally passing through an opening in a chimney-board, or by some similar arrangement, into the fireplace, and tubes passing from these to the upper parts of the room, the warm air would constantly descend through them to the continuous channel, and then into the larger leg of the Syphon." To convey away the heat from gas or other lamps, in drawing-rooms or large working apartments, it is proposed to perforate an ornamental pillar, and carry a piece of tubing under the floor to the nearest chimney. According to the diagrams it is unnecessary that the two legs of the Syphon should be of the same diameter. We have yet to see the plan in operation.

Iron Houses Abroad.—The *Journal de Liege* states that at the establishment of Seraing, and others near Verviers, a great number of cast-iron (corrugated) cottages and warehouses have been constructed, and shipped at Antwerp for the gold regions of California. A chapel and church in iron have been made for the Missionary Society of Brussels, which has attracted curiosity. Now that affairs are more tranquil in France, a great many Englishmen are employed in the iron foundries, steel factories, and the engine and machinery works.

* The patentee says,—"When this ventilator is used without a fire, as for example in the summer, it will be better (although not necessary), that the space left in the opening of the valve of the register, between the tube and the margins of the opening, should be closed by a piece of sheet tin, cut so as to fit and cover the space."

RENAISSANCE DOORWAY, ST. ANDREW'S, JOIGNY, FRANCE.



RENAISSANCE DOORWAY, ST. ANDREW'S, JOIGNY, FRANCE.

The church of St. Andrew, at Joigny, contains several matters of interest to artists, especially some paintings of the fourteenth century, and some good sculpture.

The side door represented above is a graceful composition of the Renaissance period. The arrangement of the pedestal of the columns, the large frieze with its sculptured decoration, and the management of the upper storey, are all worthy of note.

BOOKS FOR THE WORKING CLASSES.

As a working man, allow me to thank you for the fresh proof of your goodwill to our class, contained in your last number. There is a tendency to move forward to supply the defects therein laid open, and I am, as one of the starved in book-knowledge, deeply grateful for your attack on the castle of ignorance. Might I beg of you to bring before the public a suggestion made some years ago, and unheeded? That a building *apart* from the British Museum, and thereby obviating the danger of fire to that institution, should be appropriated to the reception of duplicate copies which, from various causes, are found in that library, that so the nucleus of *a library for working men, to be opened from six to eleven o'clock at night*, might be provided. Tickets might be given under restrictions, as at present, and works *lent out* upon a deposit equal to the value of them. I lay much stress upon this last item. Although the quiet of a reading-room is favourable for study, yet the possession of a book, unattainable from the ordinary libraries and very far beyond the means of a working man to purchase, gives a charm to the deal table and clean-swept hearth of home, which would not exist in the gas-lit and French-polished public reading-room. Besides, a working man, after finishing his day's work, must go home for some refreshment; and if not able to keep a book at home a few days, must lose some time in "cleaning himself." This would involve perhaps a wearing of the better coat and hat in the evening, as most men would not like to go in the stains of their labour,—albeit not ashamed of them.

I have had, through the kindness of a friend, the privilege conferred on me of a reading order for the British Museum library, but although I have had it now fourteen months, have been able but *three* times to avail myself of it. I am in the position of a starving man with a good 50*l.* note in his possession, for which no one will give change. I believe there is no want of sympathy on the part of our influential men with the growing desire for knowledge evinced by the working classes, but they want to be led to consider the subject; and I further believe it to be the mission of The Builder to keep the matter before the public. What organ so proper as the publication which is thumbed, and dirtied, and greased by working men, smiths, bricklayers, masons, and carpenters; consulted by architects, and land-owners, and clergy; and which lies (so report says) on the table of the "first gentleman" in the land?

Ogee.

USE OF BRONZE FOR MONUMENTS.

THE NELSON COLUMN, LONDON.

With regard to the remarks on the Nelson column, adopted in your last number, from a clever contemporary, I venture to send you a varied impression. I admit the unexampled sloth by which that proceeding has been characterized, and say with the *Observer*, "It is hoped, it is entreated, of the Government that they will, without any longer delay, give orders for the completion of this monument, which, as it now stands, is a satire upon the sea service, and a memento of national ingratitude to departed heroism, rather than a symbol of naval glory."

The point, however, to which I am desirous of drawing attention is the ready violation of the canons of art for the mere purpose of spicing a critique. Thus bronze,—the vehicle celebrated throughout all history, the forerunner of marble in the hands of the sculptor, and ever a favourite material,—is to be abandoned, except for cabinet *morceaux* or large single objects; but for compositions such as those on the pedestal of the Nelson column, some 14 feet square, having the chief figures of natural or heroic size, with the limbs and accessories frequently detached, and in some instances almost the entire figure, bronze is to be no longer admissible.

But what is to be the succedaneum? I fear it would be difficult to point to a material that would afford equal facilities. The inferior applicability of stone to minute parts is exemplified in the bronze sword of Bailey's figure at the top; and unless in some such ductile non-absorbent and imperishable substance as the one employed for the *relievi*, much of their finish and detail must have been omitted.

The local or pervading colour of material, wholly unrecognized in architecture, is of very little consequence to the sculptor; a monochrome in lampblack is as powerful as one in gamboge, and so thought the authors of the *black marble* centaurs of the *capitol*.

Bronze, for the ornamental part of the Nelson capital, was probably adopted from necessity,—it would never have been so well done in granite; but while it now holds in some aspects an intense depth of shade, it becomes, under the ordinary play of light, so perfectly distinct that the markings of the leaves are as perceptible as those of the wreath on the granite torus immediately below the shaft.

As to the recommendation for distorting the base, surely some better and more analogous authority should be adduced than the puny, not to say hypothetical, interior order at Bassæ, whose chief characteristic is its unparalleled eccentricity. MODERATOR.

THE "OLD HALL" AT GAINSBOROUGH.

Passing through Gainsborough a few days since, I went to see how the "restorations" were progressing at the "old hall" (a distinctive name this fine old building took when the Hickman family removed to the new hall at Thonack). The "old hall" is one of the few remaining wood and plaster buildings erected towards the close of the fifteenth century, and though it has been much neglected, it is in a pretty good state of preservation. The general plan of the building is three sides of a quadrangle, one of which is wholly occupied by the great hall, till lately encumbered with all the paraphernalia of a theatre,—the minstrel gallery serving for a dressing, and the fine oriel for a green-room. The hall is open to the roof, which has a lantern, and principals supported by arched ribs; the latter once sprung from carved corbels, not one of which are now remaining, having been removed one by one as they were found to stand in the way of the theatrical arrangements; and I believe there are those in the town who could tell where some, at least, of these corbels are yet to be found, and they might (if too much decayed to be reinstated) serve as models for new ones. All the windows towards the inner area are of oak, some projecting 7 or 8 inches from the face of the building, with cills, cornices, mullions, &c., nicely moulded, as also tracery in the upper part probably 1½ inch or 2 inches thick, giving them a screen-like appearance. These and several other windows have only of late been freed from the lath and plaster with which for generations they have been blocked up. The warder's tower (a fine piece of brickwork), and the brick front towards the east, as well as the offices towards the west, appear to have been additions made about the beginning or middle of the sixteenth century.

It is a pity so rich a relic of bygone days should be restored so superficially as this appears to be: for instance, the oak mouldings, carvings, &c., where decayed, are being patched with deal, and plaster ornament has been used for "beautifying" the stone fire-places. You will probably not wonder at this when told, as I was, that "the whole of the works" were under the superintendence of a resident lawyer; and still it is surprising, when we know that men of acknowledged taste in these matters (and one, at least, a distinguished archæologist) reside in the immediate neighbourhood. J.

ANCIENT BELL-RINGERS' RHYMES.

HATHERSAGE CHURCH.

The following is a literal copy of an inscription in the black letter, in the belfry of Hathersage Church, Derbyshire. It was written about the year 1650, by one Anthony Frith, clerk of the parish, and whose family have held the office ever since. Perhaps you may think it worthy of insertion among the curiosities of your journal.

"You gentlemen that here intend to ring,
See that these laws you keep in every thing,
Or els be sure you must without delay
The penalty thereof to th' ringers pay.
First when you do into the belhouse come,
Look that the ringers have convenient room,
For if you be an hindrance unto them,
Four pence you forfeit to these gentlemen;
Next if you do intend here for to ring,
With hat or spurs on, do not touch a string,
For if you do, your forfeit is for that,
First 4 pence down to pay, and loose your hat.
If you a bell turn o're, without delay
Four pence unto the ringers you must pay:
Or if you strike, miscall, or do abuse,
You must pay 4 pence for the ringers' use.
For every oath here sworn, ere you go hence
Unto the poor then, you must pay twelve pence.
And if that you desire to be enrould
A ringer here, these orders keep and hold,
But whoso doth these orders disobey
Unto the stocks wee will him take straight way,
There to remain untill that hee be willing
To pay his forfeit, and the clark a shilling."

The church is about undergoing a thorough restoration under the care of Mr. Butterfield. There are several good brasses in the church, but these the present representative of the Frith family will *not allow* of *being* copied by any one but himself, and for which he charges a very respectable price. C. H. B.

WHAT MUST WE DO?*

Will the pestilence, which is now rapidly abating in the metropolis, disappear for good in a few weeks? or will it smoulder in the population during the winter, and burst forth again with renewed virulence on the recurrence of the summer heats? The answer to this question depends on the use which we may make of the respite afforded by the coming frosts. If we employ the next five or six months in resolute exertions, well directed, and well sustained, to cleanse and purify the squalid low-lying districts of London;—if we get rid of the two millions and a quarter cubic feet of ordure (just about one cubic foot per man) in the midst of which we live;—if we divert to rural cemeteries the thousands of corpses that knock weekly at our metropolitan church-doors—pale applicants for lodging in the vaults below;—if we purge with ventilating air-holes, and wash with preparations of lime, all such horrible "pest-houses" as that of 48, Half Moon-street (mentioned in a recent report of the city medical officer)—"the filthy, stinking, airless residence of fourteen families, never free from fever;" or that at 4, Hartshorn-court, where nine unhappy outcasts lie rotting "in the midst of cholera and diarrhœa" in one small and stinking room;—if we stop at their source the subterranean rivers of filth and blood that take their rise from Smithfield-market and Whitechapel shambles;—if we explore and evacuate the hideous caves of Aldgate and Tyler's-market, where underground slaughterers, red-armed, and ankle-deep in putrid garbage, ply their loathsome trade;—if the black tidal ditches of Bermondsey, Rotherhithe, and Lambeth, those chosen haunts of pestilence, be cleansed at length and covered;—if, instead of the scanty and intermittent supplies of water now doled out to us at extravagant charges by corporate monopolists, we agitate for free continuous streams, at constant pressure and at reasonable price;—if, profiting at length by the terrible teaching of experience, we thus set to work in good earnest to improve the sanitary condition of London, instead of leaving it, as it actually is, worse off for air, light, water, drainage, &c., than in 1832, taking into account the increase of building and population;—then, but not otherwise, we may hope that the pestilence, now only remitting, will be finally subdued,—then, but not otherwise, we may reasonably expect that just as at Dulwich, fever was recently arrested by flushing out the drains—just as in the Long-alley district, where 500 cases of typhus occurred within six months, one passage, lately cleaned, has since remained exempt from the epidemic raging around it—and just as in a street of Hammersmith, epidemic diarrhœa, previously severe, entirely disappeared after the emptying of an overflowing cesspool—so in all London, similarly purified, a similar exemption from preventible diseases may ensue.

* From the *Times*.

Miscellanea.

The Advance of Iron-working in England is a subject for congratulation, and should be aided by architects to the extent of their power. The current number of the *Journal of Design* says on the subject of iron:—This most valuable metal may be called almost the direct agent of man in whatever he undertakes. In agriculture, manufacture, the building of ships, &c., this was early seen, and therefore its use is of very high antiquity, although not so remote, we have reason to believe, as that of either gold, silver, or copper. The inferior brilliancy of its colour may, perhaps, in some degree, account for this circumstance, as well as the greater skill required to obtain it from its ores and apply it to purposes of art. While gold and silver glitter often in their native state, and the ores of copper are of brilliant colour, the less apparent but more useful iron in its ore or native state holds out few of these lures to the finder. The native colour is still gray, and it is found in masses sometimes of meteoric origin; it also occurs in the state of pyrites, magnetic ironstone, ochry ironstone, &c. &c. It is, as we know well, a malleable and ductile metal, susceptible of very high polish, especially when united in a peculiar manner with carbon, in which state it is called steel; and this most useful combination must, we suppose, be of remote origin, for iron is mentioned repeatedly in the Pentateuch as employed for the fabrication of swords, knives, and various other sharp-edged instruments. We may estimate in some degree the value that was then attached to it from an expression in the eighth chapter of Deuteronomy, where Moses tells the Israelites, in his descriptive eulogy of the land of promise, that it is "a land whose stones are iron, and out of whose hills they may dig brass." An illustration of the same fact, at a later date, occurs in the *Iliad*, where Achilles proposes a ball of iron as one of the prizes to be distributed at the games instituted in honour of Patroclus. Within a few centuries after this, the working of this metal seems to have arrived at much perfection, as Herodotus speaks of a saucer of iron, very curiously inlaid, that was presented by a king of Lydia to the Delphic oracle, and adds, that "it is of surprising workmanship, and as worthy of observation as any of the offerings preserved at Delphi."

Sediment in Cisterns.—A correspondent says,—"Allow me to propose to those who like pure water, to have the bottom of their cistern shaped conically, with the discharging-pipe attached to the extremity: thus no sediment could be formed; and when the water was agitated by a fresh supply it would still be as clear as ever." This would prevent sediment, but not give *pure water*.

Projected Works.—Advertisements have been issued for tenders, by 25th October, for completing a Wesleyan chapel and schools at Southampton; by 7th November, for the erection of buildings for public baths and washhouses at Westminster; by 13th November, for the erection of a goods and corn warehouse at the Midland Railway station, at Leeds; by 27th October, for the erection and completion of a new prison at Lewes; by 7th November, for boilers, pipes, and fittings for baths and washhouses at Westminster; by 16th October, for 50 covered goods waggons, with folding doors, for the Great Northern Railway; by 16th, for turn-tables, traversing frames, switches and crossings, water cranes, and water piping for Lancashire and Yorkshire Railway Company at Liverpool; by 30th, for the execution of that portion of the East and West-India Docks and Birmingham Junction Railway lying between the Leacut canal and Blackwall; by 13th, for building a store-house of corrugated iron (not galvanized) at Southampton harbour; by 24th, for continuing the boring at the Artesian Well, on Southampton Common, to a depth of 50 feet, or farther, below the bore-hole, which is 1,260 feet deep,—by 24th, for constructing a new deep pump and fixing same at Southampton Common, and for repairing and lengthening present pump, and altering steam-engines, &c.—by same date, for 500 yards of 5-inch cast-iron water-pipe, and 500 yards 3-inch ditto with branches, fire-plugs, &c.; and by 9th November, for the survey, maps, and plans of Carmarthen, with a system of sewerage for same.

St. Jude's, Bristol.—A new district church is very nearly completed on Poyntz Pool, Bristol city, dedicated to St. Jude, under the direction of Mr. Gabriel, architect. It is in the Decorated style (Edward II.), and consists of a nave and chancel, tower at the west end, with revestry north of the chancel. The tower is of four stages, having a deeply-recessed doorway, above which is a 3-light window; the belfrey is lofty, with a 2-light window on each side; it is surmounted by a parapet of wavy and quatrefoil tracery, having a pinnacle at each angle, with buttresses set diagonally. The turret staircase is entered by a door inside the tower. The nave has a south doorway. The whole of the windows (except the east and west) are of two lights, and each of different tracery. There is a priests' door in the south wall of the chancel. The nave has open benches: the font is situated near the south door, and is large enough for immersion: the pulpit, which is on the north of the chancel arch, is of stone, with good panelling: the upper part of the tower arch is open, with a door beneath: the chancel arch is crossed by a screen of oak: the roof of the nave is open, and of a good pitch. On each side of the chancel is a row of four stalls. Further eastward, to the south, are sedilia and *piscina*, with drain complete (?); and in the thickness of the north wall an *aumbry* is formed. The roof of the chancel is vaulted with wood, and the bosses gilt. The floor is to be laid with encaustic tiles. The church is built of Hanham stone, with freestone dressings: and the roof is covered with stone slabs, peculiar to the churches of the middle ages. Interior length of nave, 65 feet; breadth, 29 feet: length of chancel, 25 feet; breadth, 24 feet. Taken as a whole, the church is a good specimen of revived English Pointed architecture.

Smoky Chimneys.—"A smoky chimney and a scolding wife are two of the worst evils of domestic life," says the old proverb; and to obviate the first evil ingenuity is ever racking its brain. Hence, Regent-street and every part of the metropolis has its house-tops bristling with pipes and deformed by cowls in every conceivable and almost inconceivable variety. Now, I have built many chimneys in all possible situations, and have found one simple plan everywhere succeed, the secret being only to construct the *throat* of the chimney, or that part of it just above the fire-place, *so small* that a man or a boy can barely pass through. 2ndly. Immediately above this the chimney shaft should be enlarged to double its width, like a purse, to the extent of about 2 feet in height, and then diminish again to its usual proportions. No chimney that I ever constructed thus smoked. — W. Mason, Lieut.-Colonel.

Mechanics' Institutes Suggested.—In Mr. Weld's "History of the Royal Society," the author says:—"In a curious letter from Hartlib to Boyle, dated Amsterdam, May 18, 1649, and preserved in the archives of the Society, is the following memorandum:—'*Fauxhall* is to be sett apart for publick uses, by which is meant making it a place of resort for artists, mechanicks, &c., and a depôt for models and philosophical apparatus.' It is further proposed, that 'experiments and trials of profitable inventions should be carried on,' which, says the writer, 'will be of great use to the Commonwealth.' Hartlib adds, that the late king (Charles I.) 'designed Fauxhall for such an use.' In another letter to Boyle, dated May, 1654, Hartlib says, 'The Earl of Worcester is buying Fauxhall from Mr. Trenchard, to bestow the use of that house upon Gaspar Calehof and his son, as long as they shall live, for he intends to make it a College of Artisans. Yesterday,' he adds, 'I was invited by the famous Thomas Bushel to Lambeth Marsh, to see part of that foundation.'"

Electro-telegraphic Progress.—While the cost of a telegraphic line in England is 150*l.* a-mile, in America and Prussia it is under 20*l.* a-mile. The telegraph in Prussia consists of one wire, extending over 1,402 miles, under ground, and covered with gutta-percha. Like those in America, it is by Morse, and is said to be capable of transmitting 1,000 words an hour. There are upwards of 10,000 miles of telegraph line in America, all worked cheaply. In England there are only 2,000 miles in operation.——Complaints of delay and neglect, as well as high charge here, still prevail. It must be admitted, however, that some of these complaints are most actively taken up and published by parties who have an interest in the substitution of a competitive line which is on the *tapis*, but of the real merits of which we are not yet prepared to judge.

Public Cemeteries.—Not many miles from London there are barren waste lands that at present yield not a fraction of good to us, but with a little energy and capital might be converted to uses that would be as profitable as any speculation. Cambridge-heath is well known, and none will venture to dispute what an unprofitable tract of land it is; and there is another which is as much so, near the Southampton Railway. It extends from Woking to Bishopstoke, and is upwards of 20 miles in extent, the centre of which is crossed by the railway and a canal. This spot is as well calculated for a great public cemetery as any that can be named. It is so close to the railway that it is very easy of access; and a quality of land that might be purchased at as small a cost as any, owing to the nature of the soil, nearly all being composed of sand and loam. It may be questioned whether such a soil is calculated for interment, as sand is apt to fall in from the sides of any pit. Six feet is deep enough for any grave, and coffin laid on coffin is all that is needed, which might as well be done in sand as clay or gravel: such an arrangement as this must eventually be made, either with reference to the abandonment of the uses of the water which is obtained from various sources near London, or the final removal of cemeteries round the suburbs. There must be percolations from any cemetery, and, placed as they are at present, namely, Highgate, Abney Park, Norwood, &c., there can be but little doubt that the water from the artesian wells will, by them, be eventually affected. —It is but half doing a thing to have a little cemetery here and there; why not have a good one at once, and once for all? Why have charnel-houses so near our homes, when other and better opportunities offer for their position elsewhere. Were all the little cemeteries now about us, with the addition of more land, made public grounds and parks, and each of these spots of grassy land connected the one with the other by avenues, planted with rows of trees, so as to form one large belt to connect the parks round the metropolis, it would be better calculated for our health and happiness. The present parks are insufficient, and were London to take a walk some fine day, there would be scarcely standing room for its worthy citizens. London, with a little foresight and care, might be made the grandest city in the world. P.

Provincial.—At Charlton, near Woolwich, the foundation-stone of a new church, to be called St. Thomas's, was laid on Thursday week.——Sandgate Church has been remodelled under the direction of Mr. Keeble, of Folkestone, architect, and will now accommodate upwards of 800 persons.——The Pontypool town school-room has been enlarged and opened as a church. The original building, 60 feet by 30, intersects the room at right angles, opening the whole width into it, but separated by a curtain.——The foundation-stone of St. Margaret's Church, Prestwich, was laid by the Duchess of Cambridge, on Wednesday week. The Earl of Wilton gives the land and 500*l.* towards the building fund. ——A large portion of the wall surrounding Heaton Norris gas-works fell in on Sunday week. It had bulged inwards from the weight of earth outside; and being neglected, some heavy rain completed the destructive process. —— The foundation-stone of St. Thomas's Church, Leylands, Leeds, was laid on 29th ult. The chief expense will be defrayed by Mr. M. J. Rhodes, now of Dursley, Gloucestershire, but at one time of Leeds, and by 500*l.* from the Diocesan Church Building Society.——Plans of a new crescent, to be erected at Stobcross, near Glasgow, have been prepared by Mr. Kirkland, architect, on a principle intended to afford to the middle classes, and at moderate rents, all the conveniences and elegances of the first-class dwelling. The elevations are proposed to be houses of three stories, to be let in 'flats,' or floors, of five and seven rooms, consisting of dining and drawing-room, and from three to five sleeping-rooms, with the necessary offices and conveniences. The proposed buildings have been projected by a company of private gentlemen.

Edinburgh.—The new Corn Market is rapidly approaching completion. It is floored with heavy timber, and forms the largest saloon in the city.——It is creditable to the fleshers of Edinburgh, says the local *Register*, that they have taken the initiative in urging the town council to the immediate erection of public slaughter-houses. The example is deserving of imitation by all the members of that calling throughout the country.——The provisions in the New Police Act relating to the improvement of drainage in the city, are now being put into vigorous operation by the inspector of streets and buildings, and it is satisfactory to know that the proprietors have generally evinced no reluctance to carry the provisions of the Act into effect.

Glass Manufacture.—A patent has been granted to Mr. H. Howard, Railway-place, Fenchurch-street, for—1. A peculiar construction of furnace for melting and casting glass, in which the flame is made to encircle and impinge directly against the sides of the pots, effecting thereby uniformity of heat, and an improved quality of material. 2. A portable furnace for melting glass, with one or more working holes. 3. The adaptation of a sheet of platina to the crown of melting and refining furnaces, to prevent the droppings falling into the pots. 4. A peculiar form and construction of annealing furnace with flues in the centre near the bottom, and holes in the top for allowing the heat to escape, and admitting light when emptying it of its contents.

A Cheap Filter for Water.—Having had occasion to offer a suggestion, with reference to the use of charcoal (and a friend suggests the preference to be given to that of peat) for stuffing coffin mattrasses in lieu of saw-dust, filling up others in putrescent diseases, &c., I beg to remind the public that as the water in daily use in this metropolis is any thing but what it should be, thanks to an overbearing monopoly of destructiveness, which might have been lessened long ago, if the various parish boards would have sunk artesian wells,—a very simple means exists, by which any poor family may *filter* all the water required, viz., by using a large pan or tub as the tank, and filtering the water (by ascension) through a sponge stuffed into the hole in the bottom of flower-pots, using two pots, the lower one being half filled with charcoal, and loosely covered with thin flannel, the upper one placed in it so as to sink the flannel with it, and then secured by a string: nothing can be more simple or more easily cleansed.

W. Ord, M.D.

Patent for increasing the Effective Strength of Beams.—We learn from the *Journal of the Franklin Institute*, that a patent has been granted to Mr. J. R. Remington, for "An improvement in the method of increasing the effective strength of beams or rafters of wood or other materials, used in bridges and other structures." The patentee says,—"The nature of my invention consists in so arranging timbers or beams as to avoid their tendency to break in the middle of their length, and this is effected by extending the ends of the timbers beyond the points of support, and there bracing or tying them down, so as to render the points of support fulcra; the tendency to break in the middle of the length is thus in part transferred to the points of support, for it will be evident that thus supported the timbers cannot break in the middle without breaking also at the two points of support." *Claim.*—"What I claim as my invention, and desire to secure by letters patent, is the method of increasing the effective strength of timbers or sleepers, or preventing their tendency to break in the middle of their length, by tying or bracing down their ends beyond the points of support, in the manner and for the purpose set forth. It is to be understood that this method of increasing the effective strength of beams is applicable to all kinds of material of which beams are made in various constructions."

Indian Antiquities in Kentucky.—Kentucky, says the *Ausland*, abounds in ancient earthen mounds and tumuli, much resembling those found on the shores of the Gulf of Mexico, and for the greater part like those found in Ohio, of a religious character. They generally consist of small circles and parallelograms, the mounds being generally more regular, and in the average, perhaps, greater in diameter than those northwards from Ohio. The rectangular-terraced mounds in particular are comparatively numerous and frequently of considerable size. Professor Rafinesque has mentioned the sites of many of them in his "Notes," but has given no very clear insight into their true character. He estimates the number of distinct groups in this State at not less than 600. These ancient remains occur in singular abundance in Montgomery County, and several are of peculiar interest. It may be assumed with certainty from the descriptions, that each group formerly belonged to a separate city, so that there must once have been six cities on an area now occupied by one. These imperfect glimpses of American antiquity show, that at the time of the discovery of America, her age of civilization was already over, that through the force of circumstances, the solution of which is now impossible, one great nation had disappeared, and another and ruder race, which had, perhaps, fallen from a higher state into their present barbarism, took its place. An unmistakeable family relationship shows itself in all these buildings, from those in the centre of North America, to those spread far and wide over Mexico, or even to those deep in the woods of South America.

Money for Public Works.—In your number for the 18th August, a suggestion was made, and the means for carrying on large public works pointed out;—there is another and most crying want which will probably be delayed or crippled for lack of funds—"The general drainage of the metropolis, and large towns and cities." These works, if properly carried out, will last for many generations, and the question would then naturally arise, Why should the present generation bear the whole burthen? Why not (as in the suggestion for public works) let the amount required be at once borrowed, and the interest, and such further interest as would, say in the space of 100 years, liquidate the whole, be charged on the public funds, and the sewage manure be sold to adjacent lands, at prices just sufficient to meet the expense of conveyance. The article of the 18th might most advantageously be again brought before the public. It suggests means of effecting vast good. For the purposes of war there was no lack of borrowing, and we have a heavy interest to pay for what is now deemed a very questionable advantage; surely, for the purposes of peace, of national improvement, and positive good, there ought to be no hesitation.

* *

Arrangement of Staircases in Buildings.—A patent has been taken out, in America, by Mr. W. P. Gibbs, of Boston, for a mode of arranging staircases in buildings. The patentee says,—"By my improvement in building houses, or blocks of houses, I am enabled to obtain two staircases, with the requisite entry room, in the same, or about the same space or superficial area which is generally consumed in the construction of one, according to the common practice of arranging the same; thereby saving, in a block of houses, a frontage of 5 feet on the street or passage, in each two thereof; or, in other words, if we suppose each of two houses, as generally constructed, has a width in front of 20 feet, or 40 feet including both fronts, such may be erected on my improved plan (that is, houses having their parlours and chambers, or other rooms, of the same size as those having a frontage of 20 feet on the street) on a lot of land having a front of 35 feet. Instead of the straight staircases, which denote my second improvement, two circular flights, winding around one central post, may be adopted." *Claim.*—"I claim the method or methods of arranging staircases in connection with each other, and in combination with the several suites of apartments leading thereto from said staircases, the whole being constructed and arranged substantially in the manner and for the object set forth."

Fire.—The Hall of the Carpenters' Company, London, mentioned last week, which escaped the great fire of 1666, narrowly avoided destruction by the same agent on the 6th inst., when some warehouses in London-wall, filled with costly goods, were burnt down.——Two other fires occurred while the above was raging, one in Shouldham-street, Bryanstone-square, the other in Bedford-street, Covent Garden.——At the end of last month Quebec again suffered severely,—twenty-five buildings were destroyed, worth about 25,000*l.*

Steyning Mechanics' Institution.—On the 20th and 27th ult., Mr. Cordwell, of Brighton, delivered two lectures to the members of this institution, on architecture and drawing. On the first occasion, assisted by diagrams, he gave a description of the progress of architecture, from the rude wigwam to the establishment of the "orders." The second lecture was devoted to the subject of drawing, the origin of perspective, and its utility,—explaining the various necessary points by geometrical lines and figures, and concluding by describing the nature of colours.

Western Literary Institution, Leicester Square.—The lecture season here was opened on the 1st inst. with a *conversazione*. On the 4th, Dr. Snow lectured on causes and prevention of cholera. A new and attractive feature has been added to the programme here in the shape of a series of glee concerts.

Desiccated Floor of the London Coal Exchange.—The patentees of the desiccating process, Messrs. Davison and Symington, have published a representation of the floor of the merchants' area of the New Coal Exchange, London, which consists altogether of upwards of 4,000 distinct pieces of wood, of various kinds and qualities. The great feature of the affair is, that the whole of these pieces were, only a few months since, either in the tree in the growing state, or cut from wet logs, and were prepared for use in the course of a few days, by their method of seasoning. The names of the woods thus introduced are black ebony, black oak, common and red English oak, wainscot, white holly, mahogany, American elm, red and white walnut (French and English), and mulberry. It is mentioned as a proof of the rapidity of this mode of seasoning, that the black oak is part of an old tree which was discovered and removed from the bed of the Tyne river, about the latter end of last year. The mulberry wood, introduced as the blade of the dagger in the city shield, is no less than a piece of a tree which was planted by Peter the Great, when working in this country as a shipwright. They state that no one piece of the 4,000 occupied more than ten or twelve days in seasoning.*

* *Drying Closets for Oats.*—In reply to an inquirer last week, the patentees of the above-named process have forwarded a certificate of the successful application of their apparatus for drying oats.

Newcastle School of Design.—The annual meeting of the friends of this institution was held on Friday last, Mr. W. Ord, M.P., in the chair, when the report of the committee was read, and the prizes were distributed. The report spoke encouragingly of the present state and prospects of the school, which had been more fully and steadily attended than heretofore, the average throughout the year being 87. By a removal to rooms belonging to the Natural History Society a considerable diminution of expense would shortly be incurred, and it was designed to hold an extensive fancy fair in aid of the funds. It was to be regretted that, in the very midst of previous great exertions in the getting up of the Polytechnic Exhibition, the Board of Trade should have thrown cold water on all such exertions by withdrawing the usual assistance; but the Board had since seen its error, and not only restored the Government allowance, but held out the promise of an increase should the local efforts be efficiently sustained. Thanks were voted to the teacher, Mr. Scott, for his exertions.

Make Knowledge of Art General.—Mr. Young Mitchell, of the Sheffield School of Design, lectured at the People's College, in that town, last week, on Italian art in the fourteenth, fifteenth, and sixteenth centuries. In the course of his remarks he said,—Art has in England hitherto been a sealed book. Let us hope that time is nearly at an end. For myself, I wish to see it diffused abroad amongst all classes. I would have it a necessary part of the education of every boy. There are some timid souls who fear by this means we should be inundated by Raphaels and Cellinis. There is, alas! no fear. As soon might we refuse to allow a boy to learn to read, for fear he should become a Newton or a Locke. Let us rather view the matter in its true light, and consider that, as reading gives to its possessor the power of appreciating the works of the great men of all ages, so would a knowledge of art give to its possessor a like pleasure and a like appreciation. I have been called Utopian in the idea I have of a universal art education. Let those who call me so recollect that, three centuries ago, the man who could read and write was considered a prodigy. These arts are too widely spread at this day to be considered accomplishments, and to be wanting in them is considered a reproach. I believe that a general knowledge of art would add to the wealth and consequence of the nation, and to the material comfort of the people. But this would not be all. It would elevate their minds and refine their tastes, thus increasing their intellectual enjoyments, and proving one of the most powerful helps to our onward progress.

Compression of Fuel into Blocks for Stowage.—A patent has been granted to Mr. W. Buckwell, Civil Engineer, of the Artificial Granite Works, Battersea, for a mode of compressing coke or other fuel by percussion of a steam-hammer, which may be made of three tons weight, for example, and giving fifty strokes a-minute. The granulated and moistened fuel is placed in a stout cast-iron cylinder, faced inside with wrought-iron or steel, and then exposed to the action of the hammer. Means are also provided for retaining the block of fuel in the cylinder for a short time till fully set in its new form.

Cellars inhabited in Contravention of Buildings Act.—A keeper of lodging-houses at Nos. 2 and 3, Church-lane, St. Giles's, has been fined 20s. for allowing a sub-tenant or lodger to occupy, and allow eight persons to sleep in, a cellar 14 feet by 6, and 7 feet high, with one window, but without fireplace or front door, a practice which appears to have gone on in the same tenantry for fourteen years: the fine to be repeated daily till practice discontinued—with costs. There were in all, forty-eight lodgers in No. 2, and seventy in No. 3.

Bucks County Lunatic Asylum Competition.—The commission of magistrates for providing a pauper lunatic asylum for this county invited seven architects to submit designs for the building. Some of them declined, but four designs were sent in for the approval of the magistrates; and at a meeting held on the 15th ult., one, by Messrs. Wyatt and Brandon, was selected.

LIQUID FOR CLEANSING METALS.—One of the first operations in finishing metallic work after it comes from the casting, or from the hammer, is to free it from the coat of oxide which adheres to it; this is done generally by keeping it for some time in water, strongly acidulated with sulphuric or muriatic acid. But an inconvenience in this process arises from the fact that the metal is liable to be attacked on its lines and angles, and wherever it presents a point or edge. Hence arises a double loss, both of the acid employed and of the metal. MM. Thomas and Dellisse state that they have succeeded in avoiding these inconveniences, by combining with the acid of the bath certain organic matters which have the property of preventing, or at least of considerably diminishing, the influence on the metal of the acids. According to them, glycerine, artificial tannin, napthaline, and creosote attain this end. In the baths thus composed, the scale of oxide detaches itself without dissolving, and without the metal being attacked, so that the pieces may remain in the bath as long as may be desired without alteration. These facts, announced by MM. Thomas and Dellisse, are corroborated by the experiments of M. Flachat, chief engineer of the Versailles and St. Germain Railroad. M. Mertain, proprietor and director of the forges of Montataire, and M. S. Falatieu, forge master at Bains, testify that they have tried this process upon sheet iron, and have adopted it to the exclusion of all others. The economy of this process, compared with the former ones, is about two-thirds of the acid employed, and 50 per cent. of the loss of metal in cleaning.—*Bull Soc. Enc. Indus. Nat.*

THE AMERICAN ART-UNION (New York) have erected a gallery in that city for the reception of paintings purchased for distribution. It is 84 feet long and 24 feet wide, and is said to be superior to anything of the sort in the country.

RUTLAND STATUE.—The competition models, according to the *Leicester Journal*, have been received and deposited in the local Assembly-room, for the subscribers' inspection and the committee's decision. Eight sculptors were applied to, four of whom declined to compete, though willing to undertake the commission at the price offered. One, Campbell, declined altogether, being engaged with the Bentinck statue. The models, four in number, were sent by James Westmacott, James Wyatt (two of the four), and Edward Davis.

RAILWAY COMPENSATION CASE.—The tenant of the "Neptune" inn, Bradford, had been offered, by the Lancashire and Yorkshire Railway Company, 300*l.* for his interest for seven months in the premises, during a remainder of his lease, including all other claims. The tenant refused this sum, and led evidence in court to the effect that his business yielded a profit of 863*l.* odds (although he only paid income-tax on 160*l.*); that therefore he ought to have 150*l.* as compensation for the goodwill of his business alone, 350*l.* for loss of seven months' business, and 219*l.* for loss on forced sale of furniture, &c.—in all, 719*l.* The magistrates awarded the sum of 260*l.*, without any expenses.

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TO CORRESPONDENTS.

"*Tenders, First Stone Laying, &c.*"—Architects may insure correctness in these and other matters,—the insertion of the architect's name, &c.,—by *themselves* forwarding to us the necessary information.

Received—"G. W." (the house in the Butter-market at Ipswich has been often illustrated), "W. Y." (we should be glad of an opportunity to look over the sketches quietly: could we have them for a day or two?), "W. W.," "R. P." (any article sent with that end in view will be considered), "J. R." (it depends on the terms of the conveyance), "E. W. T.," "C. C. C.," "F. L." (apply to Mr. Thicke, 17, Bridge-street, Blackfriars), "Dr. C.," "J. C.," "Old Sub." (we are forced to decline all such requests), "Your Constant Reader," "An Old Subscriber," "Captain D.," "J. W. H." (shall be mentioned), "G. S.," Colchester (we are forced to decline: take local advice), "Young Plumber" (Laxton's or Skyring's), "Ecclesine" (having seen the church, we adopt his account), "C. D.," "X. Y. Z." (we do not intend illustrating the church named), "E. H. M.," "J. P. W.," "C. W. E. P.," "Rusticus in Urbe" (proposal not novel), "F. H. C.," "R. N.," "R.," "Le Feu," "An Amateur" (we shall be glad to see the design), "J. W." (quite easy: apply to Secretary at Somerset-house), "The Reasoner" (we acknowledge the courtesy of tone, but decline controversy). "Essays on the Construction of Farm Buildings and Labourers' Cottages;" by G. A. Dean: London; Simpkin and Marshall.

"*Books and Addresses.*"—We have not time to point out books or find addresses.

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This Society was established in 1846, to afford the working classes all the advantages of a benefit club, based upon correct mutual principles, and the calculations of the most eminent actuaries, and without any inducement to attend the public house. The co-operation of all persons interested in the welfare and independence of the working man is earnestly desired. Policies are granted for the assurance of sums at DEATH from 10*l.* to 200*l.*, or at a GIVEN AGE; also DEFERRED ANNUITIES, and weekly allowances in SICKNESS, with first-rate medical attendance and medicines.

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GREY GOOSE FEATHERS, 1s. PER POUND.

BED FEATHERS were never so cheap as at present. HEAL and SON'S present prices are:—

	s. d.		s. d.
Poultry	0 8	Best Grey Goose	1 10
Grey Goose	1 0	White ditto	2 2
Foreign ditto	1 6	Best Dantzic ditto	3 0

Purified by steam, and warranted sweet and free from dust.

HEAL and SON'S List of Bedding, containing full particulars of weight, sizes, and prices, sent free by post, on application to their Factory, 196, Tottenham-court-road, London.

ZINC, from the VIEILLE MONTAGNE MINING COMPANY, is the purest known, free from alloy of iron, lead, or sulphur. It is supplied in spelter for brass founders, &c., and in sheets for ship sheathing and roofings of all kinds, and nails of all dimensions. It may be had at the following Agents', who have always a large stock in hand:—

London—Messrs. Charles Devaux and Co.; Mr. Charles Jack; Mr. William Skirrow.
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Leeds—Messrs. J. G. and T. Heaps.
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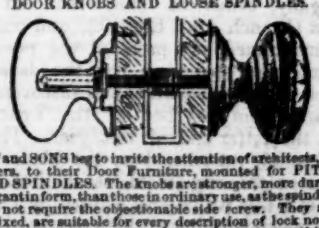
Zinc from 20 to 24 oz. per square foot is generally used for roofings, which come at least one-third cheaper than slate coverings; and the ship sheathing, which lasts from five to six years, comes two-thirds cheaper than copper or yellow metal. And if the zinc coverings are made of the Vieille Montagne Zinc, and under the superintendence of Mr. FREDERICK BROWN, the surveyor of the Company (for which no charge whatever is made), a guarantee will be given of its durability.—For further particulars and prices, apply to Mr. H. F. SCHMOLL, General Agent for England, at the Company's Offices, No. 12, Manchester-buildings, Westminster-bridge, London.

By Her Majesty's Royal Letters Patent.

PITT'S PATENT SELF-ADJUSTING DOOR KNOBS AND LOOSE SPINDLES.



ART and SONS beg to invite the attention of architects, builders, nd others, to their Door Furniture, mounted for PITT'S PATENTED SPINDLES. The knobs are stronger, more durable, and more elegant in form, than those in ordinary use, as the spindles, being loose, do not require the objectionable side screw. They are more readily fixed, are suitable for every description of lock now in use and, as they adjust themselves to doors of different thicknesses, without alteration, are particularly adapted for the country or for exportation.

In addition to an extensive stock of door furniture in china, crystal, amber, and opal glass, buffalo horn, ivory, ebony, brass, &c., en suite, with finger-plates, bell-pulls, and levers, new patterns of original design are constantly being added, and an order either to sketch or pattern supplied very promptly. A simple one, for example, in three days, and a more elaborate one in less than a week.—May be obtained through any ironmonger, or direct from the proprietors and sole manufacturers, HART and SONS Wholesale Ironmongers, 83, 84, 85, Wych-street, Strand, London.

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REDUCED PRICES.—EDWARD SIMMS (late William Cleave), of Wilton-road, Pimlico Basin, begs to acquaint Builders and the Trade that he has now on hand, at his Manufactory (the first of its kind ever established), a very large Assortment of Dry and Well-seasoned OAK and DEAL PREPARED FLOORING BOARDS and MATCH BOARDING of all sorts, from ¾ inch to 1¼ inch thick, planed to a parallel width and thickness, and at greatly Reduced Prices. Also, Timber, Deals, Oak Planks, Scantlings, Sash Sills, Mouldings prepared by Machinery, Laths, &c.—Apply at E. SIMMS'S (late W. Cleave's) Flooring Manufactory, Wilton-road, Pimlico Basin.

A REDUCTION in the PRICE of FLOOR BOARDS.—ALFRED ROSLING begs to inform the Trade and Consumers generally, that he has REDUCED the PRICE, and keeps constantly in stock a large and very general assortment of Prepared Floor Boards and Matched Boarding, planed to a parallel breadth and thickness, and fit for immediate use; also a variety of machine-prepared Mouldings, which are finished with great accuracy and attention to quality of workmanship.—Southwark Bridge Wharf, Bankside, and Old Barge Wharf, Upper Ground-street, Blackfriars.

GREAT REDUCTION IN THE PRICE OF FLOOR BOARDS AND MATCH BOARDING.—THOMAS ADAMS (late S. Dare), Mahogany and Timber Merchant, Bermondsey New-road, Southwark, near the Bricklayers' Arms, begs to inform his friends and the trade generally, that he has in stock a large assortment of the above goods, fit for immediate use, at prices which only require a trial to prove their decided cheapness. Also mouldings prepared by machinery from the very best material, and in a superior manner; cut deals and scantling of every dimension; mahogany, cedar, rosewood, wainscot, elm, beech, oak, &c., in planks, boards, veneers, and logs; pantile, oak, and fir laths; wheelwrights' goods. All sawn and prepared goods (except timber) delivered free of expense; sawing charged at mill prices. Very extensive drying sheds.

SEASONED SPRUCE FLOORING, prepared by improved machinery, in a superior manner.

Three quarter inch thick .. 16*s.* 6*d.* per square.
One inch ditto .. .. .. 13*s.* ditto.

SAMUEL ARCHBUTT'S Sawing and Planing Mills, King's-road, Chelsea.

MUIR'S PATENT PLANING MACHINE.

SAW MILLS, GILLINGHAM-STREET, PIMLICO.

TIMBER of any size, PLANK, DEALS, and BATTENS, &c., Sawn on the most approved principle. Boards, &c., Prepared, Matched, and Grooved, by Muir's Patent Machinery. The Mills have all the advantages of navigation and water-carriage, being connected with the Thames by the Grosvenor Canal. Goods fetched from the docks and carted home free of charge.

Address to HENRY SOUTHAM,
Saw Mills, Gillingham-street, Pimlico.

N.B. Estimates given for Sawing and Planing.

GENERAL WOOD-CUTTING COMPANY.—SAWING, PLANING, AND MOULDING MILLS, Belvedere-road, Lambeth, between the Suspension and Waterloo Bridges. SAWING and PLANING in all their branches executed with the greatest despatch and punctuality. A large Stock of seasoned and beautifully WORKED MOULDINGS, consisting of upwards of 100 different patterns kept constantly on hand; also an extensive assortment of dry prepared FLOORING BOARDS, of all qualities and at reasonable rates.

PHILLIPS, ALLCARD, and CO.'S IMPERIAL DEAL SAW-MILLS, WENLOCK-ROAD CITY-ROAD, beg to invite the attention of builders, carpenters and the trade, to their well selected stock, consisting of a large assortment of TIMBER, DEALS, PLANKS, and BATTENS, of every description, and thoroughly seasoned. They also have constantly on hand, and ready for immediate use, white and yellow prepared FLOORING BOARDS of all thicknesses, and matched lining, cut and planed to a parallel breadth and thickness. And they are enabled to offer all their goods at very moderate prices

DESICCATED WOOD.—DAVISON and SYMINGTON'S PATENT.—Builders, Cabinet-makers, and others, will find it much to their advantage to patronise this new process of seasoning. The greenest wood can thus not only be seasoned in an incredibly short space of time, at a small cost, but is rendered stronger, entirely free from shrinkage, and in every respect better than wood treated in the ordinary way; thereby saving capital, interest of money, insurance, and all the other inconveniences attending the keeping of a large stock.

The DESICCATING SAWING and PLANING MILLS are situated at PLOUGH BRIDGE, BOTHERHITHE, adjoining the Commercial and East Country Docks, from whence parties obtaining their material can have the same converted as required, and sent home fit for immediate use.—T. GIBLING, Manager.

For licenses to use the patent, scale of prices, or other information, address, ANGUS JENNINGS, Secretary, Patent Desiccating Company, 41, Gracechurch-street, City.

TO ARCHITECTS, BUILDERS, UPHOLSTERERS, AND OTHERS.

WOOD CARVING done in the cheapest and best manner. Estimates given to any amount. Pulpits, reading-desks, altar-rails, stalls, and other church fittings supplied complete. Old carvings restored by J. STALOS, Wood Carver and Manufacturer, 43, Berwick-street, Soho, London.

JORDAN'S PATENT MACHINE CARVING and MOULDING WORKS for WOOD and STONE, Belvedere-road, Lambeth, and 154, Strand.—TAYLOR, WILLIAMS, and JORDAN beg to call the attention of the building community to a new feature of their establishment, and, at the same time, to thank their numerous patrons and friends for the very liberal support they have lately experienced, which, they assure them and the public, it will be their constant endeavour to deserve, by giving their customers an increasing share of the advantages arising from the constant improvements in the machinery which they have just succeeded in applying to the production of the most intricate carving in Caen and other freestones, and in statuary marble.

T., W., and J. particularly solicit the attention of architects and builders to the fact that, by the use of this machinery, a very large saving, both of time and money, is effected,—so great, indeed, that in many cases they can deliver a well-finished article in Caen stone for less money than it can be obtained in cement, while their wood-carving will, in some cases, be found to come into close competition with the best kinds of composition ornament.—For prices and estimates apply at 154, Strand.

TESTIMONIAL FROM CHARLES BARRY, ESQ.

"Westminster, May 16th, 1848.

"Gentlemen,—In reply to your letter requesting my opinion of your patent Carving Machinery, I have much pleasure in stating, from an experience of more than two years, in its application to the production of the wood carvings of the House of Peers, and other apartments of the New Palace, at Westminster, that I am enabled to make the most favourable report concerning it, and to add that it has more than justified the favourable terms in which I recommended it in 1845 to her Majesty's Commissioners of Woods and Works for adoption.—I remain, Gentlemen, yours faithfully,

"CHARLES BARRY."

Messrs. Taylor, Williams, and Jordan."

FLEXIBLE INDIA-RUBBER PIPES AND TUBING, For Railway Companies, Brewers, Distillers, Fire Engines, Gas Companies, Gardening and Agricultural purposes, &c.—J. L. HANCOCK'S patent VULCANIZED INDIA-RUBBER HOSE-PIPES are made to stand hot liquor, and acids without injury—do not become hard or stiff in any temperature (but are always perfectly flexible) and as they require no application of oil or dressing, are particularly well adapted for Fire Engines, Pumps, Gas, Beer Engines, Gardens, Liquid Manure, and all purposes where a perfectly flexible pipe is required. Made all sizes, from ¼ inch bore upwards, and of any length to order. Vulcanized India rubber garden hose fitted with brass-taps, copper branch and rose complete, ready to be attached to pumps, water-butts, or cisterns. Sole manufacturer, JAMES LYNE HANCOCK, Goswell-mews, Goswell-road, London.

N.B. Vulcanized India-rubber washers of all sizes for joints or hot-water and steam pipes, and vulcanized sheet rubber any thickness for all kinds of joints, and other purposes.

ANSTON STONE, used for Building the New Houses of Parliament.—W. WRIGHT and Co. beg to inform Architects, Engineers, Builders, and others, the Anston Stone can be supplied in any quantity on the shortest notice. This valuable stone, so celebrated for its durability, colour, and texture, is well known, having been selected in preference to all others, by the Commissioners of Woods and Forests, for building the New Houses of Parliament. It is very superior for Monuments, Tombs, &c. &c.

W. Wright and Co. have made arrangements to have a stock always on hand at Brine's Marble and Stone Wharf, Horsfall-basin, Maiden-lane, King's-cross.—Any further information can be obtained on application to W. WRIGHT and Co., Anston, near Sheffield; or to T. SHARP, their Sole Agent in London, 27, Burton-crescent.

CAEN STONE SPECIALLY SELECTED for EXTERNAL WORKS.—LUARD, BEEDHAM, and Co., extensive proprietors of Caen Stone Quarries, Allemagne, solicit inspection of their CAEN, AUBIGNY, and RANVILLE STONE, selected at Caen and imported direct to their Depot.

AUBIGNY STONE resembles Portland in colour and texture, has less of shell, flint, vents, and other obstructions in working. Its durability may be ascertained by specimens obtained from ancient buildings, and now at the office of L. B. and Co.; also by the Tables of Chemical Analysis, by R. Phillips, Esq., F.R.A., &c., by its appropriation to Lighthouses, the Royal Chateau, and other public works in Normandy. The price being the same as Portland, renders it a useful competitor.

RANVILLE STONE of the best description, similar to Bramley Fall, suitable for heavy ground works, hydraulic purposes, dock and quay walling, &c.

A large stock of the above always on hand at Caen Sufferance Wharf, Rotherhithe; Vauxhall-bridge; Northern Wharf, Battle-bridge; No. 8 Wharf, Paddington-basin; and Kensington-basin. Shipments direct to any port of the United Kingdom. Offices, 18, Southwark-square, Borough, and at Caen Wharf, Rotherhithe.

The Waterman steam-boats run from Westminster and London bridges to Lavender-pier, close to Caen Wharf.

CAEN STONE.—W. and J. FREEMAN offer Caen Stone, guaranteed from the best quarries in Allemagne, at 1s. 2d. per cubic foot, delivered to vessels or waggons from their Sufferance Wharf, at Deptford. Stone from the inferior beds, or from the Maladrerie Quarries (if ordered) on lower terms. Cargoes shipped direct from the quarries to any part of the coast at the same price. Aubigny and Ranville Stone on the lowest terms.—Application at the office, Millbank-street; or to Mr. TURNBULL, Sufferance Wharf, Grove-street, Deptford.

CAEN STONE.—P. FOUCARD, Quai des Abattoirs, Caen (propriétaire de Carrières à Allemagne), offers CAEN STONE guaranteed from the first quarries at Allemagne, at 1s. 2d. per cubic foot, delivered to vessels or waggons (free of expense), from the depôt at the Whitby and Scotch Wharf, 14, Fore-street, Limehouse.—Contracts taken for any quantities.—Carcoes shipped to order, from Caen, to any part of the coast, on the same terms.—Apply to Mr. BASCHET, at the office, 39, Stoney-street, Borough Market; or to Mr. S. WEBSTER, at the Wharf.

CAEN STONE DEPOT.—"ORIGINAL SUFFERANCE" NORWAY WHARF, GREENWICH.—W. TUCKWELL, Caen Stone Quarry Proprietor at Allemagne, near Caen, respectfully solicits the attention of architects, builders, clerks of works, masons, and others, to the SELECTED STOCK of CAEN STONE on his wharf at Greenwich, and from his long practical experience in the various qualities of Caen stone, he confidently states that this Caen stone cannot be surpassed.

W. TUCKWELL has always at his chantier, on the quai at Caen, a large quantity ready for shipment when required. Orders received at the wharf, as above, also at the offices of Mr. R. A. WITHALL, Architect, 80, Cheapside, where samples and prices, with further information, may be obtained.

N.B. Samples may also be seen at the office of "The Builder."

MARKET WHARF, REGENT'S-PARK BASIN.—Messrs. MARTIN and WOOD (late Scoles and Martin) solicit the attention of Builders, Masons, and others, to their stock of Portland, York, and Derby Stone; also Bangor Slates, Lime, Cement, Plaster, Bricks, Tiles, Laths, Fire-goods, Fire-stone, &c., sold at the lowest possible prices for Cash. Portland Headstones, Ledgers, Steps, Landings, &c., cut to order on the shortest notice. Tarpaulings let on hire. A Stock of Northen's Drain Pipes, Syphons, &c., always on hand. Mortar, Lime and Hair, Fine Stuff, &c.

BATH STONE.—Messrs. RANDELL and SAUNDERS, Quarrymen, Bath, have appointed Messrs. MARTIN and WOOD their sole agents in London. M. and W. beg to inform Architects, Masons, Builders, &c., that a large assortment of the much approved CORSHAM DOWN and other BATH STONE will always be kept at the Depot, opposite the Great Western Railway Station, Paddington. Orders will also be received at Market Wharf, Regent's-park Basin.

VALENTIA, County Kerry, IRELAND.— A large stock of VALENTIA SLATE SLABS of all thicknesses, sawn by machinery, now on sale at the Valentia Slate-yard, Millbank-street, Westminster.

STIRLING'S BELVEDERE SLATE WORKS, Belvedere-road, Lambeth.—A reduced list of prices of the best WELCH SLATE SLABS, planed both faces, will be sent on application (post paid) being made, and inclosing a postage stamp. The prices are under those advertised for inferior slates.

PIMLICO SLATE WORKS.—GREAT REDUCTION in the PRICE of SLATE.—Mr. MAGNUS has the pleasure to publish the following reduced prices for Welsh Slate Slabs of the finest quality, with sawn edges, and planed both faces:—

	Thick.						
	¾ in.	⅞ in.	1 in.	1¼ in.	1½ in.	2 in.	
	d.	d.	d.	d.	d.	d.	
Under 4 ft. long, or 3 ft. wide	3½	5	6	7	9	12	₩ ft. sup.
Ditto 5 ft. do., or 3 ft. do.	4	5½	7	8	10	14	do.
Ditto 6 ft. do., or 3 ft. do.	4½	6½	8	9	10½	16	do.
Ditto 7 ft. do., or 3 ft. do.	5	7	9	10	11	18	do.

Larger Slabs in proportion.

	Thick.						
	¾ in.	⅞ in.	1 in.	1¼ in.	1½ in.	2 in.	
	d.	d.	d.	d.	d.	d.	
Cutting to order	1	1	1½	1½	1½	2	₩ ft. sup.

FURTHER REDUCTION IN THE PRICE OF CISTERNS.

Cisterns above 100 gallons, planed both faces, inch thick, grooved and bolted, 1s. only per foot super., or 2s. per foot cube (outside dimensions). Fixing within five miles of the manufactory, 3d. per foot super., or 6d. per foot cube. Enamelled boxed Chimney-pieces, variously marbled, hitherto priced at 45s. to 80s. now reduced to 25s. and 30s. The above prices are all net to the trade.

Mr. Magnus will send his book of Drawings of Chimney-pieces, and printed price-list of ditto, free to any part of the country, on receipt of 3s. in postage stamps (to be deducted from first order received,) and which will be subject to a very liberal discount to the trade.—Address, 39, Upper Belgrave-place, Pimlico.

TERRA-COTTA, or VITRIFIED STONE WORKS, King Edward-street, Westminster-road, London.—M. H. BLANCHARD, from late Coade's Original Works, Belvedere-road, Lambeth, begs to inform the Nobility, Gentry, Architects, and Builders, that he has re-established the manufacture of that invaluable material, which has been successfully adopted by our eminent Architects and others, in the adornment of our noblest buildings, nearly 100 years has proved the imperishable nature of the material, the specimens of those times now exhibiting all their primitive sharpness.

Groups, statues, friezes, capitals, panelling, pinnacles, finials, terminals, Tudor, and other chimney shafts, balustrading, fountains, fonts, tazzas, vases, coats of arms, devices, and every description of architectural ornament, at prices in many instances nearly half the cost of stone.

Specimens of the material to be seen at the Office of "The Builder," 2, York-street, Covent Garden, and at the Works.

SAMUEL CUNDY, Mason and Builder, PIMLICO MARBLE and STONE WORKS, Belgrave Wharf, Pimlico.

GOTHIC WINDOWS, ALTAR SCREENS, and other Works, produced at a remarkably cheap rate.

FONTS from £2 upwards. Specimens on view of the Early English, Decorated, and Perpendicular styles.

ALTAR TABLETS Illuminated.

First-rate ARTISTS retained for SCULPTURED GOTHIC CARVINGS.

A Good VEINED MARBLE CHIMNEY-PIECE and a fashionable REGISTER STOVE for £2 3s. Stone Chimney-pieces from 8s.

MEMORIAL CROSSES, MONUMENTS, TOMBS, HEADSTONES, &c., in great variety of design. Letters cut and complete for fixing in the country.

The Public are respectfully invited to view the carefully selected and manufactured Stock (by improved machinery) of Veined Marble Chimney-pieces—cheap and good.

RESTORATION of CHURCHES. SAMUEL CUNDY, having had much practice in this branch at Westminster Abbey and other important Gothic fabrics, is desirous of Estimating for Restorations.

S. C. has invented a Machine for Hoisting Building Materials to great altitudes, by which an immense saving has been effected; eminently adapted for Restoring Cathedrals, High Towers, &c.

CLERKS of WORKS have their particular attention called to the above establishment. A Book of Designs forwarded on application.

Works of all kinds prepared and sent off per railway—fixed or not, as required.

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MINTON and CO.'S ENCAUSTIC and other PATENT TILES for Churches, Entrance Halls, Conservatories, Balconies, &c., Antique, Geometrical, and Alhambric Mosaics, manufactures of a highly decorative character and extreme durability. Slabs and Tiles for Fireplaces, Hearths, and Covings for Grates, Door Furniture, White Glazed and Ornamental Tiles for Baths, Dairies, and Kitchen Ranges may be had in great variety at their Warehouse, 9, Albion-place, Blackfriars-bridge, London, and at their Manufactory, Stoke-upon-Trent, Staffordshire.

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BRICKS, FIRE-BRICKS, TILES, and GLAZED DRAIN PIPES.—All sorts of Kiln Burnt Bricks, Tiles, Glazed Terra Mont Water-Pipes, Drain ditto, Chimney Pots, &c., are CONSTANTLY ON SALE, at my London Depot, Bricklayers' Arms Terminus, Dover Railway, where an early inspection of the goods will much oblige.—All orders and letters to either address will meet with prompt attention.—Prices forwarded upon application.

HENRY BROWN, Proprietor.

Brick, Tile, and Pottery Kilns, Mount-pleasant, Marden, Kent.

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STOCKS, best quality, delivered, 36s.; second quality, 34s.; superior country pan tiles, 48s.; plain ditto, 30s. Stourbridge, Welsh, Newcastle, and Windsor Fire Bricks, Lumps, Tile, Clays, Loam, &c., at very reduced prices. Shape goods made to any pattern (for Engineers, Gas Companies, Brewers, and others), in twenty-one days; Slates, Sanitary Pipes, Dutch Clinkers, Patent Malting Tiles, &c., at WARD and CO., Honduras Wharf, Bankside, London. Country buyers will find this the best market.—N.B. A large quantity of Stock bricks wanted for cash payments.

FIRE-CLAY and TERRA-COTTA HOLLOW BRICKS, &c.—Chimneys, pipes, glazed and plain, vases, capitals, panellings, paterae, brackets, trusses, beadings, and ornaments of all kinds, usually made in cement or stone-ware, are now offered, at cement prices, in the above material, the superiority of which, in colour, durability, and general appearance and execution, is so well known. Patent Hollow Bricks of the most approved form kept on hand. The attractive designs of the Architectural Publication Society executed upon an order for twenty-five of a sort. The less complicated forms will be kept on hand.—SAMUEL TUPMAN, Agent to the Cliffe Colliery and Terra-Cotta Works, Wakefield, Yorkshire. Western Wharf, Adelphi, September 20, 1849. Entrance at bottom of George-street, Adelphi.

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PAPER-HANGINGS by MACHINE and BLOCKS.—The trade supplied in town and country, with machine goods, from first-rate new designs, at the lowest prices they have ever been sold in this country; and block goods, for style and quality, not to be surpassed by any house in England. All the patterns are registered, and can only be supplied by HENNELL and CROSBY, Queen-street, Southwark-bridge-road. Cheapest house in London for oak, marbles, and panel decorations. A set of patterns, 5s., to be deducted off an order of 5l.—Terms, cash.

GUTTA PERCHA PAPER for DAMP WALLS, &c.—JEFFREY, ALLEN and Co., PAPER-HANGING MANUFACTURERS, 115, High-street, Whitechapel, call the attention of persons having houses with damp walls to the above important application of gutta percha. This paper, at a trifling cost, by preventing the rise of damp, renders an apartment more healthy, and effectually preserves the wall papers therein from discolouration and decay.—N.B. The Gutta Percha Paper can only be obtained at JEFFREY, ALLEN, and CO.'S FACTORY, Kent and Essex-yard, Whitechapel High-street, London.

TODD'S PATENT PROTOXIDE PAINT, at a very considerable REDUCTION of PRICE.—This article is extensively used by the principal Railway and Gas Companies, and by Builders and others for painting Stucco. It prevents iron from rusting, wood from decay, masonry from damp, and the hottest sun has no effect upon it.—Manufactured by CHARLES FRANCIS and SONS, Cement Works, Nine Elms, London.

EMERSON'S PATENT LIQUID CEMENT is ready for use, is simple in its application, and only ONE-EIGHTH the cost of oil paint; for beauty it is pre-eminent over all other materials used on the fronts of houses, giving the exact appearance of FINE CUT STONE; can be used at once on fresh Roman cement or other plastering; is particularly calculated for country houses, villas, or gate entrances that have become soiled or dingy, which can be beautified in any weather, at a trifling cost.—Sold in casks of 1, 2, and 3 cwt., at 8s., 15s. and 21s. each.

PATENT MINERAL PAINT.

Invaluable as a coating for SHIPS' SIDES AND BOTTOMS, all kinds of WOOD or METAL work, roofing felts, leaky roofs, spouts and gutters, doors, sheds, railing, and all kinds of out-door work, and being perfectly waterproof, will preserve their surfaces from atmospheric influence and decay.—Requires no preparation, and will dry in a few hours.—Sold in casks, 2 to 30 gallons. Brilliant Black, 2s.; Rich Brown, 2s. 2d. per gallon.

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TO THE BUILDING PUBLIC.

FIRST-RATE ORNAMENTS in PORTLAND, ROMAN and other CEMENTS, and PLASTER of PARIS, at reasonable prices, consisting of Vases, Balusters, Capitals, perforated Panellings, Cantilevers, Brackets, Trusses, Wreaths, Scrolls, Masques, Heads, Figures, Friezes, Gothic and other Chimney-Shafts, Soffits, Bed-moulds, Paterae, &c., &c. Centre Flowers from 10 feet diameter downwards. An assortment of Shop-front Trusses always ready for fixing.—HERBERT and SON, Modellers, &c., 43, Parker-street, Drury-lane.

ATKINSON'S CEMENT.—This Cement has hitherto been manufactured in Yorkshire, and, through long detention at sea, has often proved stale and unfit for use on its arrival in London. By the arrangement now made, the Cement will be manufactured in London, and thus presented to consumers in a fresh and genuine state, by the sole Agents, J. B. WHITE and SONS, Millbank-street, Westminster.

KEENE'S and PARIAN CEMENTS, for internal stucco, are employed very advantageously in place of wood for skirtings, architraves, and panel mouldings, and for in-door flooring, instead of stone. The peculiar properties of PARIAN Cement allow of its being painted or papered upon within a few hours of its application, and thus render it an important substitute for common plastering in those cases where expedition and beauty of finish are essential.—J. B. WHITE and SONS, Millbank-street, Westminster, Patentees of KEENE'S Cement, Licensees of PARIAN Cement.

PORTLAND CEMENT, as manufactured by J. B. WHITE and SONS, possesses all the properties of the best Roman Cement, but has the advantage over that material of wholly resisting frost; and when used as a stucco it does not vegetate or turn green in damp situations, and requires no colouring. Employed as an hydraulic mortar for brickwork, it carries four to five measures of sand to one of cement, and is proved by trial to become harder and stronger in these proportions than Roman Cement with but one measure of sand. This superior connecting power, combined with its eminently hydraulic properties, point it out as the fittest material for building sea and embankment walls, the lining of reservoirs, cisterns, and baths, and for all those purposes where strength and a perfect resistance to water are required.

Manufacturers—J. B. WHITE and SON, Millbank-street, Westminster, and 36, Seel-street, Liverpool.

PORTLAND CEMENT, solely MANUFACTURED by WILLIAM ASPDIN, Son of the Patentee.—Messrs. ROBINS, ASPDIN, and Co. request reference to Nos. 296, page 491; and also Nos. 284 and 285, pages 343 and 351 of "The Builder," for accounts of EXPERIMENTS on the strength of Portland Cements, whereby the great superiority of their Cement is manifest. This Cement has been proved for upwards of twenty years in the Thames Tunnel to resist the action of water; it is stronger in its cementitious qualities, harder, and more durable than any other description of Cement; it does not vegetate, oxydate, or turf green; nor is it affected by any atmospheric influence whatever the climate, resisting alike the action of frost and heat. It is manufactured to set in from five to sixty minutes. For all purposes that Cement is applicable the Proprietors challenge competition.—Orders received by Messrs. ROBINS, ASPDIN, and Company, at their Manufactory, Northfleet, Kent, and their Wharf, Great Scotland-yard, Whitehall; also by their Agent at the Depôt, 1, Back Gores, Liverpool.

MARTIN'S PATENT FIRE-PROOF and ORNAMENTAL CEMENT—REDUCTION of PRICE.—The Patentees beg to inform their Friends and the Public that they have made arrangements which enable them to offer this invaluable cement at a considerably reduced price. It has now been before the public so many years, and has obtained so high a standing in the estimation of all who have used it, that it is unnecessary to comment on its merits. The Patentees, however, feel called upon to observe, that by its use—from the greater amount of surface which a given quantity will cover, and the small amount of labour required in working it, a saving of 25 to 30 per cent. is effected as compared with other cements for internal use. Specimens shewing its beauty, hardness, and applicability to all plain and ornamental purposes, may be seen; and the Cement in any quantity obtained of the Patentees, Messrs. STEVENS and SON, at the Plaster and Cement Works, 196, Drury-lane, London.—Agent for Liverpool.

Mr. GEORGE NEWTON, No. 6, Lawton-street, Bold-street.

JOHN'S and Co. PATENT STUCCO CEMENT and PAINT.—GREAT REDUCTION of PRICE.—The Patentees beg to inform the trade and the public generally, that in order to induce a more extended adoption of these excellent materials, and to bring them into direct competition with the inferior articles in common use, they have determined to reduce the price nearly 25 per cent., confidently trusting to a mutually advantageous result. These materials, for their beauty, durability, imperviousness, perfect resistance to frost or heat, and great cheapness, fully justify the confidence reposed in them, as shown by numerous testimonials. For INTERIOR SURFACES this cement possesses the following: marbable properties; having no caustic qualities, it may be painted on or papered within a few days after its application, and a new house may thus be rendered habitable without any delay. It never blisters, cracks, or vegetates; very soon becomes as hard as stone, and may be cleaned with a brush and water.—Prospectuses, specimens, and every information connected with its use, price, &c., may be obtained from the sole agent, PHILIP HARE, at the Warehouse, 22, Steel-yard, Upper Thames-street.

TO PLASTERERS, BUILDERS, &c.

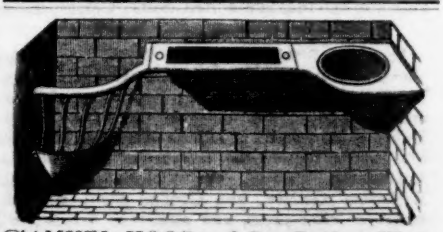
JOHN'S and Co. PATENT PERMANENT STUCCO WASH.—The attention of the trade is requested to this permanent wash, which cannot be equalled in its properties of beauty and durability for exterior stucco or brick, and being a non-absorbent, is admirably adapted for interior surfaces, for railway stations, union workhouses, schools, asylums, barracks, stables, prisons, &c. It will not wash off, may be tinted to any colour, and 1 cwt. will cover 300 yards.—Price 10s. per cwt. Sole agent, PHILIP HARE, 22, Steel-yard, Upper Thames-street.

GRAY STONE and WHITE FLAME LIME WORKS, BEWLAY CLIFF, on the Medway, KENT.—GEORGE POTTER and CO., having added the old and well-known business at the Purfleet Wharfs, Earl-street, Blackfriars, and Camden-town, to their former town establishments, are ready to supply Contractors, Builders, Gas Companies, and the Trade generally, with Gray Stone, White Flame, and Chalk Limes, upon the usual terms. Annexed is a list of their wharfs:—

City—Purfleet Wharf, Earl-street, Blackfriars.
Pimlico—Grosvenor Basin.
Chelsea—Bruce's Wharf.
Paddington—No. 19, North Wharf (adjoining Great Western Terminus).
Camden-town—James-street.
City-road Basin—Wharf-road.

GREAVES'S BLUE LIAS LIME, WARWICKSHIRE CEMENT, and WARWICKSHIRE IMPROVED CEMENT, at RUTTY and VEREY, 2, South Wharf, Paddington; and W. and T. N. GLADDISH, Pedlar's-acre, Lambeth. The present low rates of transit enable the proprietor to send to any part of the kingdom at very moderate prices, from his works, Southam, Warwickshire.

PARIAN CEMENT, for internal stucco, instead of common plastering, may be painted and papered within twenty hours of its application to the bare walls, and by the use of which, rooms may be rendered habitable before the materials commonly adopted would begin to dry. It is worked without the slightest difficulty, the labour being easier and less expensive than with any other stucco whatever. A finer quality is also prepared for ornamental plastering, for encaustic painting, &c. &c.—Specimens of which may be seen at the works of the Patentees, CHAS. FRANCIS and SONS, Nine Elms, London.



SAMUEL HOOD and Co., Castings Ware- house, 81, Upper Thames street. REGISTERED STABLE FITTINGS. Enamelled Mangers, with double hay-racks, or with enamelled water-cistern on one side.—Also, girders, columns, hot water pipes, rain water pipes, eaves, gutters, sash weights, &c., at the lowest prices.